

FURTHER NOTES ON AUSTRALIAN COLEOPTERA
WITH DESCRIPTIONS OF NEW GENERA AND
SPECIES.

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XXIII.

LAMELLICORNES.

MELOLONTHINI (Tribe).

This aggregate of genera appertains, in Lacordaire's arrangement, to the second "Legion" of the family "*Lamellicornes*" on account of some of the abdominal stigmata being placed on the ventral segments. Lacordaire divides this second "Legion" into "Tribes," of which the *Melolonthini* is one and is distinguished by those of the abdominal stigmata which are placed on the ventral segments not diverging strongly from the line in which the dorsal and ventral segments meet. The "Tribe" *Melolonthini* is divided by Lacordaire into "sub-tribes," of which, so far as I know, only four are represented in Australia,—viz. *Systellopides* (separated since Lacordaire's time from his sub-tribe *Pachypodides*) *Sericides*, *Sericoides*, and *Melolonthides* (true). The *Systellopides*, are distinguished from the rest of the above-named sub-tribes by the atrophy of the maxillary lobe in combination with the position of the labrum on the same plane with the clypeus; while the true *Melolonthides* differ from the remaining two by the front coxæ being (not conical and prominent but) transverse. Lacordaire distinguishes the *Sericides* and *Sericoides* by the relation between their clypeus and labrum, the latter being in the *Sericides* intimately connected (soudé) with the clypeus so as to be "indistinct" while in the *Sericoides* it is "free." Here it is to be noted (as Lacordaire remarks) that in some genera (e.g. *Diphucephala*) the clypeus is divided by a suture which gives its front part the appearance of a free labrum, and it must be admitted that there are genera in which it is exceedingly difficult to say that the piece in question is not the real labrum. As an instance I would mention *Phyllotocus*. Comparing an example of this genus with some of the *Systellopides* I cannot discover any difference of structure justifying the assertion that the front piece of the head is a part of the clypeus in one and the labrum in the other. It must be remembered doubtless that Lacordaire

does not appear to have actually examined any *Systellopid* species, and that it is Dr. Sharp who states that it is the labrum which in the *Systellopides* is attached to the front of the clypeus and is on the same level with it. I do not venture to assert that either of these accomplished entomologists (both extremely eminent anatomists) is wrong,—which would be highly presumptuous in any but a specialist on anatomy,—but I draw attention to the matter in order to show that Lacordaire's method of distinguishing the *Sericides* from the *Sericoides* is at any rate not easy of application to the ordinary student.

However, there can be no doubt that these sub-tribes of *Melolonthini* form two very natural and distinct aggregates in each of which moreover there is a highly characteristic relation between the clypeus and labrum, and I think this can be expressed in terms (different from those of Lacordaire) which at any rate as a supplementary statement of characters will be found useful inasmuch as it avoids the necessity of determining in difficult cases whether the front piece of the head is or is not a true labrum.

In the *Sericides*, whether we regard the front piece of the head as a labrum or follow Lacordaire in regarding it as an extension of the clypeus and the labrum as invisible, it stands good that the front face of the front piece of the head looked at from in front has very little downward vertical or oblique development, so that the insertion of the palpi is very little below the plane of the clypeus, but in the *Sericoides* it is far otherwise. In them (and also in the true *Melolonthides*), the labrum is attached to the clypeus at a position considerably below the plane of the upper surface of the latter, so that if the latter be looked at from in front it seems to be strongly thickened downward (in some species obliquely downward and hindward) and the labrum is attached to it at a point considerably down this thickened front face. As in the *Sericides* so in *Sericoides* there are genera in which the labrum is not very easy to see as an organ distinct from the clypeus, and moreover the labrum itself is of very variable form in the *Sericoides* (in some genera even becoming an erect lamina the apex of which rises considerably above the plane of the clypeus); nevertheless a result of the attachment of the *base* of the labrum being as indicated above is that the palpi are inserted considerably below the plane of the upper surface of the clypeus and all the observations I have made confirm the opinion that their being so inserted is reliable evidence that the relation of the clypeus and the labrum are of the *Sericoid* rather than the *Sericid* type.

The adoption of this view of the distinctive characters of the Australian *Sericides* and *Sericoides* involves some little re-adjust-

ment of the species to be attributed to those sub-tribes respectively, inasmuch as it renders necessary the removal of *Mæchidius* from the former to the latter and of *Pachytricha* and *Phænognatha* from the latter to the former. These transfers, however, appear to me to tend altogether to a more natural classification. All the three genera affected by it are extremely isolated in their characters, and it is probably open to question whether each of them may not eventually be regarded as representing a distinct sub-tribe, but even so it seems to me that in a natural arrangement the sub-tribes containing *Phænognatha* and *Pachytricha* would stand before the *Sericides* in the *Melolonthini*, and that containing *Mæchidius* certainly after the *Sericoides*. If the arrangement I thus suggest be followed it will have the effect of associating together in the *Sericides* species having remarkable sexual characters in the front tarsi (unless *Phænognatha* of which I know only one sex be an exception) and in the *Sericoides* species not exhibiting such sexual characters (or at least only in a slight degree and in occasional members of a genus) and also of making the *Sericides* of Australia consist entirely (unless *Epholcis*, *Phænognatha* and *Pachytricha*, which I have not seen alive, be exceptions) of genuinely flower-frequenting day-fliers, and the *Sericoides* (so far as I know, and I have collected nearly all the genera) contain no genus at all with similar habits; for although a few *Heteronyces* and *Liparetri* are sometimes to be met with on flowers (as indeed what insect are not? I once found some flowers thickly studded with a *Hydrophilid*) certainly neither *Liparetrus* nor *Heteronyx* can be reckoned a flower-frequenting genus.

Since the publication of Lacordaire's volume dealing with the *Lamellicornes* numerous Australian genera have been added, and as their diagnoses are scattered over a wide field of literature it seems desirable before passing to the description of some new species that are before me to make some remarks on the aggregates to which those new species are referable. I will begin with the

SERICIDES (sub-tribe).

Excluding *Mæchidius* and including *Pachytricha* and *Phænognatha* (as proposed above), four genera known to Lacordaire would form the Australian contingent of this sub-tribe. To these five genera must now be added (including two new ones described below and one formerly described under a nom. præocc).

- A. Head (at any rate of the male) armed with a
 horn *Phænognatha*.
 AA. Head unarmed.
 B. Each claw bidentate beneath *Pachytricha*.
 BB. Claws not bidentate beneath.

- C. Hind coxæ elongate.
 D. Hind tarsi with claws elongate slender and simple.
 E. Basal four joints of front tarsi of male together much longer than apical process of tibia.
 F. Intermediate claws similar to hind claws *Phyllotocus*.
 FF. Intermediate claws short (in male thickened and with long appendages) *Phyllotocidium*, gen. n.
 EE. Basal four joints of front tarsi together shorter than apical process of tibia *Cheirrhaphica*, gen. n.
 DD. Hind tarsi with short claws.
 E. These claws simple *Neophyllotocus*, gen. n.
 EE. These claws appendiculate *Cheiragra*.
 CC. Hind coxæ short and parallel.
 D. Eyes free or nearly so *Diphucephala*.
 DD. Front part of eyes divided by a canthus *Epholcis*.

PHYLLOTOCUS.

Many of the species of this genus are incapable of certain identification where comparison of types is not feasible. Unfortunately 30 names are attributed to it. In Trans. Ent. Soc. N.S.W., I., pp. 80 &c., the late Sir W. Macleay published a review of the then existing names and added nine more, but although he complained of the imperfection of Boisduval's descriptions his own descriptions were of the same kind as Boisduval's,—one of them consisting of eight words of Latin and 13 of English in which no definite character is mentioned apart from color, and the rest are not much better. I have had the advantage of examining some of Sir W. Macleay's types and therefore am in a position to attempt a contribution towards the elucidation of the genus. In Trans. Ent. Soc., N.S.W., II., p. 187, Sir W. Macleay described two additional species, and in P.L.S., N.S.W., 1887, p. 225, another.

Although most of Boisduval's descriptions are in my opinion incapable of being definitely attributed to any particular species it seems to me desirable, as Sir W. Macleay has applied them to species in his collection, to accept his identifications and to let the insects in question bear Boisduval's names. These names are *præusta*, *rufipennis*, *australis*, and *mæstus*. The first of them (*præusta*) Sir W. Macleay regards (correctly I think) as a synonym of *Macleayi*, Fischer, which last is a species that can be confidently identified. Boisduval described another species (*Lottini*) which he referred to *Phyllotocus* only with doubt and which Sir W. Macleay believed to be a *Liparetrus*; it certainly may be disregarded.

Erichson described one species (*P. bimaculatus*); it is easily recognisable.

Blanchard followed with three species (*erythropterus*, *navicularis* and *ustulatus*); all are easy to identify.

Burmeister was the next describer, and he also added two names (*discoidalis* and *pectoralis*) the former of which he gives as Mr. W. S. Macleay's name (no doubt MS.) and states that it is identical with *australis*, Boisd. It seems to me decidedly that it is a variety of the species that Sir W. Macleay has called *australis*, Boisd., and that the insect which Sir W. Macleay subsequently named *iridescens* is the same thing. *Pectoralis* (as Sir W. Macleay points out) is not a *Phyllotocus*.

In 1858 Bohemann described three species (*marginicollis*, *oblongus* and *velutinus*) which Sir W. Macleay says (I think correctly) are all founded on varieties of the species that he calls *mæstus*, Boisd.

Then Sir W. Macleay follows with his 12 names on which I make the following remarks.

Assimilis is excessively close to *Macleayi*, Fisch. Its author states that the only good specific character to separate it by is a slight groove on its forehead. After examining a long series I have failed to find such a groove constantly present or absent in either species, and doubt whether the two are distinct.

Kingi is undoubtedly a good and distinct species. I believe it to be the insect which Boisd. called *rufipennis*, but as Sir W. Macleay has attributed that name to another insect I shall not disturb his nomenclature.

Marginipennis has puzzled me considerably. Its author states that it is abundant in the neighbourhood of Sydney; yet I have seen nothing among the numerous *Phyllotoci* collected by me (or sent to me from) near Sydney which agrees with the description. Unfortunately I can find no reference to it in the notes I made when examining Sir W. Macleay's types,—so I must pass it by with the remark that unless there is some clerical or printer's error in the description it is probably a good species unknown to me.

Iridescens (as noted above) I have little doubt is identical with *australis*, Boisd.

*Palliatu*s is decidedly a var. (not I think sexual, as Sir W. Macleay conjectures) of *discoidalis*.

Marginatus its author conjectures to be the female of *marginipennis*. Judging by the description I have no doubt it is a form of that species, though I doubt the difference being sexual.

Ruficollis I cannot identify confidently. The colours are differently described in the Latin diagnosis and the English

following it. It is possible that the species I call *ruficollis* in the following tabulation may be wrongly identified.

Scutellaris is a good species.

Apicalis (from Northern Queensland) is a good species.

Sericeus, its author states, resembles *australis*, Boisd.; but no difference from that species is pointed out, and the description applies perfectly to the species named *australis* in the Macleay collection. I have not seen the type of *sericeus*, which is not in the Macleay Museum, but is doubtless in the "Australian" Museum.

Variicollis I think I know; the type specimen is no doubt with that of *sericeus*, and I have not seen it, but I have an example from the neighbourhood where *variicollis* was taken, which agrees well with the description. It seems to be a good species.

Vittatus is an extremely isolated species from tropical Queensland.

The remaining three species (*occidentalis*, *Meyricki*, and *dispar*) are of my own nomenclature.

It will thus be seen that after all necessary weeding out eighteen species remain which may be regarded as at present forming the genus *Phyllotocus*. The following tabulation shows satisfactory structural characters for distinguishing most of the described species. There are however two (*apicalis*, Macl. and *marginipennis*, Macl.) which I am unable to place in the tabulation owing to the vagueness of their descriptions.

- A. Elytra glabrous (or nearly so) except along their lateral margins.
 B. Elytra nitid, not velvety, with interstices similar *inter se* and not (or scarcely) convex.
 C. Maxillary palpi elongate, their apical joint narrow and cylindrical or nearly so.
 D. Front tibiæ in both sexes externally tridentate (including the apical process).
 E. Prothorax rectangular at base ... *Macleayi*, Fisch.
 EE. Hind angles of prothorax strongly obtuse... .. *bimaculatus*, Er.
 DD. Front tibiæ with only one tooth above the apical projection.
 E. Head testaceous *occidentalis*, Blackb.
 EE. Head black *Meyricki*, Blackb.
 CC. Maxillary palpi much shorter, their apical joint somewhat oval *mæstus*, Boisd.
 BB. Elytra more or less opaque, often velvety, with convex unequal interstices.
 C. Hind femora black or nearly so.
 D. Prothorax strongly lobed in the middle of base *scutellaris*, Macl.
 DD. Prothorax not (or scarcely) lobed in middle of base.
 E. Puncturation of prothorax faint and obscure (as usual in the genus) .. *ustulatus*, Blanch.

- EE. Puncturation of prothorax unusually strong and well defined... .. *varicollis*, Macl.
- CC. Hind femora testaceous *vittatus*, Macl.
- AA. Elytra clothed with erect hairs (at any rate along the base and suture).
- B. The hairs fringing the prothorax black or nearly so.
- C. Prothorax entirely black.
- D. Head very coarsely unevenly and by no means closely punctulate.
- E. Convexity of prothorax (viewed from side) even,—at any rate in the middle.
- F. Elytra entirely set with erect pilosity *erythropterus*, Blanch.
- FF. Disc of elytra glabrous *rufipennis*, Boisd.
- EEF. Prothorax strongly declivous hindward all across base *Kingi*, Macl.
- DD. Head closely evenly and somewhat finely punctulate *navicularis*, Blanch.
- CC. Prothorax red, or at any rate with its sides broadly red.
- D. Prothorax very strongly lobed hindward at middle of base *ruficollis*, Macl.
- DD. Prothorax not or but little lobed at base *australis*, Boisd.
- BB. The prothorax fringed laterally with close-set white pilosity *dispar*, Blackb.

It seems desirable to say a word regarding the sexual characters of *Phyllotocus*, which to some extent vary with the species. In all of them the male has one of the claws of its front tarsi more or less (in some species very much more than in others) dilated. There is also a tendency towards darker coloring in the males than in the females of some species, and in several species the elytra of the female are much more hairy than those of the male. This latter character is very noticeable in *P. australis*, Boisd.; but is extremely developed in *P. Kingi*, Macl., the female of which has its elytra densely set with velvety pile while in the male the elytra are nearly glabrous on the disc. Sir W. Macleay is certainly justified, I think, in regarding Lacordaire as in error when he finds sexual characters in the antennæ of *Phyllotocus*. I do not observe any sexual differences in the armature of the front tibiæ.

PHYLLOTOCIUM (gen. nov. *Sericidarum*).

Mentum sat elongatum sat angustum; palpi labiales breves, articulo ultimo obconico; palpi maxillares sat breves (fere ut *Cheiragræ*), articulo apicali elongato-ovali quam ceteri conjuncti vix breviori; labrum breviter transversum (a *Cheirrrhamphicæ* parum dissimile); oculi modici; antennæ modicæ, 8-articulatæ, clava (maris quam feminæ magis elongata) 3-articulata; prothorax æqualis; scutellum modicum; elytra maris haud, feminæ vix manifeste, striata; pedes robusti minus elongati; tibiæ anticæ extus (processu

apicali vix extus directo excepto) haud dentatæ; unguiculi modice elongati (ab articulo 5° tarsorum longitudine haud multo dissimiles), simplices, maris anterioribus incrassatis et appendicibus 2 elongatis membranaceis instructis; coxæ posticæ quam metasternum paullo breviores; corpus supra sat glabrum, subtus pilosum.

Type *P. (Cheiragra), Macleayi*, Blackb.

The tarsal character of this species (mentioned by me in describing it, P.L.S., N.S.W., 1891, p. 482) must, I am now convinced, be regarded as inconsistent with a place in the genus *Cheiragra*; its facies moreover is quite *sui generis*, the glabrous nitid upper surface being suggestive of certain *Phyllotoci* while its head is that of a *Cheiragra*; the structure of the legs (and especially the claws) is quite different from that of any other species known to me, while the coppery (or purplish) gloss of the upper surface distinguishes it among its allies.

CHEIRRHAMPHICA (gen. nov. *Sericidarum*).

Mentum sat elongatum sat angustum; palpi labiales breves, articulo ultimo obconico; palpi maxillares modici (quam *Phyllotoci Macleayi*, Fischer, multo breviores), articulo ultimo subcylindrico ad apicem subacuminato; labrum breve transversum a clypeo sutura vix manifesta divisum; oculi modici, fere ut *Phyllotoci*; antennæ modicæ, 8-articulatæ, clava brevi 3-articulata; prothorax æqualis; scutellum modicum; elytra oblonga, parum manifeste striata; pedes elongati fere ut *Phyllotoci*, sed maris tibiis anticis compresso-dilatatis et tarsis anticis brevibus (harum articulis basalibus 4 brevissimis, articulo apicali quam tibia antica vix breviori, unguiculo permagno deformi); coxæ posticæ quam abdomen vix breviores; corpus pubescens.

It will be seen from the above diagnosis that this genus must be placed in Lacordaire's "Groupe" *Phyllotocides* and that it differs from *Phyllotocus* notably in the front piece of the clypeus being very short, strongly transverse, and not separated from the preceding piece by a sharply defined suture, also by the very remarkable sexual characters in the front legs of the male, and the very different maxillary palpi. The hind coxæ are very elongate, their hind edge being (on the lateral margin) scarcely farther from the apex of the abdomen than from the hind margin of the metasternum.

C. pubescens, sp. nov. Sat ovalis; pube pallida sat elongata adpressa vestita; subnitida; nigra, vix ænea, antennis palpis pedibusque brunneo-testaceis (nonnullorum exemplorum prothorace elytris abdomineque brunneo-testaceis, nonnullorum

femoribus posticis vel 4 posterioribus infuscatis); capite prothoraceque sparsim sat fortiter, elytris minus sparsim minus fortiter, pygidio leviter squamose, punctulatis; prothorace transverso, antice leviter angustato minus emarginato, lateribus sat arcuatis, basi bisinuata, angulis posticis obtusis; scutello modico; elytris haud (vel vix manifeste) striatis; tibiis anticis extus bidentatis. Long., $1\frac{3}{4}$ — $2\frac{1}{2}$ l.; lat. $\frac{4}{5}$ — $1\frac{1}{5}$ l.

In the male the basal four joints of the front tarsi are incrasated and very short,—together scarcely reaching to the apex of the apical process of the tibia. The fifth joint is excessively dilated and as long (without including the claws) as the preceding joints together. One claw is as long as the fifth joint has a very large lamina like appendage at its base and is attached to the apex of the fifth joint in such fashion that it is directed backwards almost parallel with the tarsus. The other claw is normal. The apex of the basal part of the fifth joint is thickly clothed with long hairs.

W. Australia; taken by Mr. Lea at Swan River and Geraldton.

C. interstitialis, sp. nov. Mas.—Ovalis; parum lata; pube brevi erecta pallide ferruginea vestita; sat opaca; nigra, antennis palpis pedibus anterioribus 4 tarsisque posticis plus minusve rufescentibus; capite crebrius subtilius, prothorace sparsim sat grosse, elytris quam prothorax magis crebre vix minus grosse, pygidio minus perspicue, punctulatis; prothorace vix transverso, antice sat fortiter angustato, lateribus modice arcuatis, basi vix bisinuata, angulis posticis obtusis; scutello modico; elytris costis obsoletis angustis circiter 4 instructis; tibiis anticis extus haud (processu apicali excepto) dentatis; tibiis posticis robustis. Long. $2\frac{1}{3}$ l.; Lat. $1\frac{1}{5}$ l.

I see no reason to separate this species generically from the preceding although as will be seen by comparing the descriptions the two are not much like each other superficially. The erect (not addressed) hairs with which it is clothed, its clypeus more evenly rounded in front, its much less transverse prothorax its elytra with distinct traces of costæ, its very stout hind tibiæ, the much more numerous setæ at the apex of each tarsal joint, &c., contribute to make this species extremely distinct from the preceding. Its facies, indeed, is very much that of a *Cheiragra*, but I do not see how it can justifiably be placed among species with short appendiculate claws while (as is the case) its claws are altogether as characterized in the diagnosis of *Cheirrrhamphica*. Perhaps eventually it may be regarded as the type of a new

genus. The male characters of the front tarsi are quite as in *C. pubescens* except in the basal lamina of the large claw being scarcely developed.

N. Queensland ; sent by Mr. French.

NEOPHYLLOTOCUS (gen. nov. *Sericidarum*).

Type *N. (Macrothops) rostrata*, Macl.

I propose this name as a substitute for *Macrothops*, Macl. nec Boisd., which is a nom. præocc., having been used by Boisduval for a genus already named *Phyllotocus* by Fischer de Waldh. Sir W. Macleay's diagnosis is not very complete as it does not include any reference to the claws, where the most obvious distinctive characters of the *Phyllotocides* are to be found. In the present genus the claws are extremely short (about half the length of the 5th tarsal joint), and are all simple in the female. In the male one of the claws on each of the 4 anterior tarsi is bifid.

Sir W. Macleay described a second species of his genus *Macrothops* under the name *pallidipennis* which he stated was founded on specimens that had lost their "palpi, tarsi &c." It is therefore, impossible to say whether that species is rightly associated with the present insect.

CHEIRAGRA.

Sir W. Macleay formed this genus for a number of species which he described so briefly that it is impossible to identify any of them (as species) with certainty except by comparison, which has not been practicable for me.

I have before me a considerable number of specimens evidently attributable to the genus. Sir W. Macleay in his diagnosis of the genus omitted to mention that the claws are appendiculate and furnished at their base with large membranous processes, which I take to be the most reliable generic character. In the male the front tarsi have one claw similar to those of the female while the other claw is enormously developed and turned back against the surface of the tarsus.

With the exception of two examples (from a far Northern locality, unfortunately both females and therefore undesirable for description) I cannot satisfy myself that the specimens of this genus before me represent more than one species. They are from various localities in Victoria and N.S. Wales and differ to a remarkable extent in coloring, so that it is hard to find two quite alike. This species does not appear to be *Phyllotocus pusillus*, Blanch. (which Sir William seems to regard as the type of *Cheiragra*) as its prothorax is not black in any variety that I have seen and certainly could not be described as "haud punctatus."

I suspect it is *C. ruficollis*, Macl., but unfortunately there is a discrepancy between the 12 words of Latin and the 33 of English of which the description consists, as the Latin makes the elytra testaceous and the English implies that they are black (at least in the male). However, the specimens before me include elytra entirely black, entirely testaceous, and black with various testaceous blotches. There are no differences among Sir W. Macleay's descriptions of *C. ruficollis*, *pallida*, *lurida*, and *atra* except in respect of color and slight distinctions in size. *C. pygmaea* is probably a distinct species which I have not seen, and *aphodioides* may be distinct, as Sir W. Macleay says that the front tibiae of the male are more slender than in its allies.

EPHOLCIS.

This genus bearing much superficial resemblance to *Mæchidius* has entirely the *Sericid* relation between clypeus and labrum. Mr. C. O. Waterhouse in founding it expressed the opinion that it is intermediate between *Diphucephala* and *Mæchidius*. Its coloring and the character of its sculpture as well as the presence of appendages at the base of the claws are certainly suggestive of the latter, though it is to be noted that the claw appendages are not really characteristic of *Mæchidius*, being absent in many species, and an analogous structure being found in an isolated species (*Nosphisthis*) described below. But the structure of the head is totally different from that of *Mæchidius* and if it were to be regarded as allied to that genus rather than *Diphucephala* it would upset the validity of *Sericides* and *Sericoides* as distinct sub-tribes. I have little doubt that it is a flower-frequenting genus. *Mæchidius Albertisi* and *bilobiceps* of Fairemaire are evidently referable to *Epholcis*. I suspect that the former is identical with *E. divergens*, Waterh., in which case its name must sink as a synonym.

I refer provisionally to this genus *Mæchidius gracilis*, Waterh. which its author says is "very unlike all the others in that genus." It appears to me impossible to consider it a *Mæchidius* or even closely allied thereto, inasmuch as its prosternal sutures are not open to receive its antennæ and its mouth structure is of the *Sericid* type, the front of its labium being almost in contact with the apex of the clypeus without the intervention of a visible labrum. Its facies is undoubtedly highly suggestive of *Mæchidius* and very different from that of *Epholcis*, but nevertheless I can find no character to separate it from the latter genus which is not evidently merely specific in other genera, e.g. *Diphucephala* and *Mæchidius*. The following is a new species allied to *E. (Mæchidius) gracilis*.

E. longior, sp. nov. Sat elongata ; sat opaca ; picea, antennis palpis pedibus et corpore subtus rufescentibus ; setulis brevibus gracilibus adpressis, et pilis erectis elongatis sparsis, testaceis vestita ; capite antice truncato elevato-reflexo, lateribus sinuatis ; prothorace sat transverso, antice fortiter angustato crebre rugulose sat grosse punctulato, lateribus fortiter rotundatis, angulis anticis sub-acutis minus prominulis posticis rotundato-obtusis, basi rotundata ; elytris obscure seriatim punctulatis, lineis 3 obscurioribus vix elevatis instructis ; tibiis anticis extus 3-dentatis (dentibus inferioribus 2 approximatis, a 3^o sat remotis) ; tarsorum posteriorum articulo basali quam 2^{as} multo longiori ; unguiculis singulis ad basin appendiculis singulis armatis. Long. $3\frac{1}{2}$ l. ; Lat. $1\frac{3}{4}$ l.

Larger and more elongate than *E. gracilis*, Waterh., with the prothorax much more coarsely punctulate ; the clypeus considerably more reflexed in front (causing the labium to appear less nearly in contact with the edge of the clypeus when the head is looked at from beneath), and with its sides more sinuate.

N. Queensland ; sent by Mr. Cowley.

SERICOIDES (Sub-tribe).

This sub-tribe is by far the most numerously represented among the Australian *Melolonthini*, and moreover presents extraordinary difficulties in classification, owing to the presence of the most remarkable structural differences between insects that apart from those differences are not even very notably distinct from each other as species. These differences are found in the number of joints in the antennæ, the structure of the antennal club, the form of the labrum and the hind coxæ, and even, to some extent, the structure of the claws. To regard such differences as generic (which one would do unhesitatingly in the case of almost any other *Coleoptera*) would require an enormous multiplication of the genera known at present and would split up numerous genera that are among the most natural aggregates in the whole coleopterous series. For example, to regard those differences as generic would involve the formation of at least nine new genera out of *Heteronyx*, than which in a natural arrangement a more homogeneous aggregate could hardly be found, and changes almost as sweeping would be required in nearly all the other large genera.

However at present the sub-tribe is in a state of extreme confusion. Numerous genera have been formed since the publication of Lacordaire's work, but their diagnoses are scattered over a wide field of literature and so far as I know have not been systematically classified. The result of this is that anyone having new species to describe is faced with the greatest difficulty in

ascertaining the genus to which (at least some of them, in all probability) should be referred. I propose therefore, before proceeding to describe various new species before me, to review the *Sericoid* genera and endeavour to set forth their characters in a tabulated form. I shall not, however, attempt the ambitious task of placing the genera in anything like a permanently satisfactory condition, as in my opinion that would be at present impossible, and moreover would require very extensive alterations that should be made by someone who has a wider knowledge than I possess of the *Sericoides* of other parts of the world.

I may say, in passing, that I believe the character which should have the greatest weight in the classification of the *Sericoid* species into genera to be the nature of the sexual distinctions. There are far too many species of which the sexual characters are at least uncertain to allow of this system being carried out to-day, but I am convinced that in it will be found the key to the essential distinctions among the *Sericoid* genera.

What I shall attempt will be simply to determine which of the existing generic names can be retained as founded on characters that are (at any rate among other characters) valid, and show the relation of them to each other,—making as few additions as possible, and not attempting to split them up even in cases where I have little doubt that a fuller knowledge of the sexes will eventually require that they be split up. It is necessary however to add a few new genera.

It will be observed that in the following classification of genera considerable weight is conceded to characters seeming very slight in comparison of others which are treated as of little value though apparently more important; as where the nature of the elytral striation is made generic and the number of antennal joints specific. On this I have to remark that in what I believe will be the really scientific classification characters founded on the nature of the sexual distinctions will take the place of the apparently unimportant characters now employed and also that, however superficial some of these make-shift characters may appear, long and careful observation of a very extensive series of species from many collections has convinced me that they accompany real generic difference and that there is no fear of future observations requiring the genera thus slightly characterized to be suppressed, but that the effect of future observations will be only to show the necessity of further sub-division of the genera now distinguished by apparently slight characters.

The following may be noted in respect of the result of my observations regarding the Australian *Sericoides*. 1. The nature of the armature of the claws where the claws are not simple cannot be relied upon as generic, but the difference between claws

that are either bifid or appendiculate and those that are simple (disregarding membranous basal appendages) is strictly generic. 2. The number of antennal joints and the number of joints forming the antennal club are not generic (although the difference between the number of joints in the club where it is sexual probably *is* generic). 3. Characters founded upon the granulation of the eyes are strictly generic. 4. The difference between simple and geminate striation of the elytra is nearly always combined with reliable generic differences. 5. Marked differences in the form of the clypeus (at least in many cases) are much more generic than differences in the form of the labrum. 6. Differences in the hind tibiæ are generic.

From these general observations I now pass to some remarks on the generic names that at present stand attributable to the Australian *Sericoides*. These are, I believe, 34 in number (excluding "*Melolontha*" which seems to have been applied loosely by some of the earlier authors to species of this subtribe). Of these *Cotidia* and *Colobostoma* are mere names given (without mention of characters) by Boisduval to species that cannot be identified. It is not unlikely that *Colobostoma* was founded on the insect since named *Platydesmus sulcipennis* by Sir W. Macleay, but the evidence is not strong enough to upset the later name. I have already discussed this point in Proc. Linn. Soc., N.S.W., 1890, p. 517 (note).

Haplonycha = *Colpochila*. *Silopa* and *Hostilina* = *Heteronyx*. *Philochlenia* and *Omaloplia* = *Caulobius*. Of the names sunk as synonyms in the above statement I regard it as possible that two (*Haplonycha* and *Philochlenia*) may have to be restored as representing valid genera when the sexual characters of *Colpochila* and *Caulobius* are known in a long range of species, but I do not find any other generic character that seems sufficient to confirm them.

After the above eliminations there remain 28 genera, to the validity of which I am not able to bring any definite objection, but of them there are four that I have not been able to identify among the large collections of *Melolonthini* that I have examined. On each of these a few remarks seem called for.

1. *Automolus*. This genus was formed by Burmeister for a small Tasmanian species, to which Erichson seems to have attached the MS. name *Liparetrus angustulus*. Burmeister says that its antennæ are nine-jointed. Assuming the correctness of that statement I should say that the genus is a good one and that I have not seen it. If it could be that Burmeister had counted the joints incorrectly and that they are really eight (it is easy to go wrong about the minute antennal joints of a small *Liparetrus*) I should suspect that the species is one of those which Sir W.

Macleay calls "Section II" of *Liparetrus*, and in that case I am not at all sure that it would not be justifiable to retain the name *Automolus* and regard Macleay's "Section II" as forming a distinct genus. But in this uncertainty I must pass the genus by with the remark that it is certainly very closely allied to *Liparetrus*.

2. *Microthopus*. This is another genus (from W. Australia) which Burmeister characterises as closely allied to *Liparetrus*. If its author is right in saying that it is founded on a male example it is unknown to me. If he was mistaken about its sex I should regard it as possibly identical with my genus *Macleayia* (in which case my name would lapse). Here again I must pass the genus by as uncertain.

3. *Homolotropus*. This genus was founded by Sir W. Macleay (Tr. Ent. Soc., N.S.W., II., p. 193) on an insect that I am unable to identify. Apart from the antennæ I find no character in the diagnosis that seems really generic, and the antennal characters alone do not appear to me conclusive. Nevertheless, from the description of the species, I take it that the genus is likely to be a good one, but there is no character mentioned by the author that enables me to place it in a tabulation. Moreover as Sir W. Macleay asserts that the position of *Homolotropus* is near *Xylonychus* (which Lacordaire places among the true *Melolonthides*, where I think it is certainly more at home than in the *Sericoides*) it is quite possibly not a member of the *sericoid* group.

4. *Odontonyx*. Another of Sir W. Macleay's genera concerning which I cannot speak positively. The diagnosis would fit *Eurychelus* but in the description of the *species* the author states that there "seems to be" a kind of membranous appendage beneath the last joint of the tarsi, and this remark I am afraid compels me to pass the genus by, with the observation that it is probably near *Eurychelus*.

To the above I have to add nine new genera bringing up the total number to 33.

A. Prosternal sutures normal.

B. The claws simple (disregarding membranous appendages).

C. Winged species.

D. Femora glabrous and very slender and elongate *Telura*.

DD. Femora shorter and stouter and more or less pilose.

E. Elytra very short exposing much of the propygidium (all small species).

F. Clypeus margined in front.

G. Antennal club 3-jointed in both sexes ... *Liparetrus*.

GG. Antennal club 5-jointed in the male ... *Macleayia*.

FF. Clypeus not margined in front ... *Comophorus*.

EE. Elytra of normal length (except in a very few large species).

- F. Eyes large (projecting laterally at least as far as clypeus), nitid, and scarcely (or very finely) granulate.
- G. Front tibiae not as in GG.
- H. Antennal club not setose on the faces of the joints in either sex.
- I. Tarsal joints not bearing tufts of long soft hairs.
- J. Labrum distinct (at least by a suture) from vertical front face of clypeus.
- K. Free outline of clypeus an even curve (or nearly so)
- L. Base of prothorax margined.
- M. Elytra geminate-striate.
- N. Hind tibiae short, their inner outline not nearly straight.
- O. Apical joint of labial palpi conic, not much longer than penultimate ... *Aneucomides*.
- OO. Apical joint of labial palpi longer and more cylindric.
- P. Labrum (viewed from above) truncate or emarginate in front.
- Q. Canthus cutting into front of eye well defined... ... *Colpochila*.
- QQ. Front of eye entire (or all but entire) *Petinopus*.
- PP. Labrum strongly projecting, reflexed and angular at apex ... *Glossoscheilifer*.
- NN. Hind tibiae more elongate, their inner margin straight.
- O. Antennal club differing sexually (always longer than apical joint of maxillary palpi) *Scitala*.
- OO. Antennal club in both sexes not or scarcely longer than apical joint of maxillary palpi *Anodontonyx*.
- MM. Elytra not geminate-striate.
- N. A membranous appendage at the base of each claw *Nosphisthis*.
- NN. No membranous appendage at base of claws.
- O. Eyes widely separated.
- P. Spurs of hind tibiae normal.
- Q. Apical joint of labial palpi elongate and cylindric... ... *Frenchella*.
- QQ. Apical joint of labial palpi short and more or less conic ... *Platydesmus*.
- PP. Hind tibiae without spurs distinct from the fringing cilia ... *Anacanthopus*.
- OO. Eyes very large, subapproximate above and beneath the head ... *Engyops*.
- LL. Base of prothorax not margined.
- M. Transverse carina of hind tibiae wanting (as in *Scitala*).
- N. Sterna clothed with long pilosity ... *Colpochilodes*.
- NN. Sterna almost glabrous ... *Sericesthis*.
- MM. Transverse carina of hind tibiae well defined (as in *Colpochila*) ... *Neso*.

K.K. Front of clypeus with sharp lateral angles, its sides straight... ..	<i>Sciton</i>
K.K.K. Front of clypeus emarginate	<i>Byrrhomorpha</i> .
J.J. Labrum entirely confused with vertical front face of clypeus	<i>Dysphanocheila</i> .
I.I. Tarsal joints each with an isolated tuft of long soft hairs beneath	<i>Ocnodus</i>
H.H. The faces of the joints of the antennal club clothed with erect setæ	<i>Diphyllocera</i> .
G.G. Front tibiæ excessively dilated and sinuous (not dentate) externally	<i>Pachygastra</i> .
F.F. Eyes smaller, and more distinctly granulate; surpassed by clypeus.	
G. Front tibiæ not having a tooth close to the base externally	<i>Haplopsis</i> .
G.G. Front tibiæ with a minute tooth close to the base externally	<i>Caulobius</i> .
C.C. Apterous species	<i>Callabonica</i> .
B.B. Claws bifid or appendiculate.	
C. Apterous species	<i>Pseudoheteronyx</i> .
C.C. Winged species.	
D. Antennæ with more than 7 joints.	
E. Tarsi of male normal.	
F. Form strongly depressed	<i>Eurychelus</i> .
F.F. Form notably more convex	<i>Heteronyx</i> .
E.E. Anterior four tarsi of male strongly dilated... ..	<i>Neoheteronyx</i> .
D.D. Antennæ with only 7 joints	<i>Nepytis</i> .
A.A. Prosternal sutures open to receive the antennæ	<i>Mæchidius</i> .

ANEUCOMIDES (gen. nov. *Sericoidarum*).

Mentum antice emarginatum; palpi labiales breves, articulo ultimo breviter conico quam præcedens parum longiori; palpi maxillares sat elongati, articulo ultimo quam præcedens sat longiori; labrum modice exstans, antice late rotundatum (superne visum); oculi sat magni nitidi vix manifeste granulati, antice a cantho profunde incisi; antennæ (speciei typicæ) 9-articulatæ, clava 4-articulata (hac maris quam articuli præcedentes conjuncti parum breviori, feminæ haud observatæ); prothorax transversus; elytra geminato-striata; tibiæ anticæ extus 3-dentatæ, posticis perbrevisibus ad apicem valde dilatatis; unguiculi simplices; sterna femoraque pilosa.

The species for which I propose this new generic name is an extremely puzzling one. Its facies is strongly suggestive of a small *Dynastid* of the *Oryctomorphid* group, but its abdominal stigmata are decidedly those of a *Melolonthid*, its antennal structure moreover being quite inconsistent with the idea of a *Dynastid*. It is a short robust insect with hind femora and tibiæ very short and incrassate, and bears no resemblance in facies to any other *Melolonthid* known to me. Nevertheless, I have failed to discover any structural character that I can rely upon to dis-

tinguish it from *Colpochila* except the conic form and unusual brevity of the apical joint of the labial palpi and the somewhat peculiar labrum (slightly approaching that of *Glossoscheilifer*), which viewed from above appears as a lamina projecting to a moderate degree from the lower part of the vertical front face of the clypeus, and having its free outline broadly rounded. In the unique male before me the abdomen is remarkably short but this may possibly be the result of distortion merely, and I also observe that the bristles forming the apical fringe of the hind tibiæ are unusually short and thick.

A. coloratus, sp. nov. Brevis, sat latus; sat nitidus; supra sat glaber sed prothorace pilis fimbriato, subtus in sternis femoribusque pilosus; rufus, elytris nigro-piceis; clypeo subtilius crebrius, capite postice magis fortiter, prothorace ut clypeus sed minus crebre, elytris crebrius fortiter, pygidio subtiliter sparsim, punctulatis; clypeo antice rotundato sat fortiter reflexo; prothorace postice marginato, fortiter transverso, antice fortiter angustato, angulis anticis acutis minus prominulis posticis (superne visis) fere rectis, basi utrinque vix sinuata; elytris parum distincte striatis (striis geminatis), interstitiis planis; tarsorum posticorum articulo basali quam 2^{us} vix breviori. Long., 5 l.; lat., 2 $\frac{4}{5}$ l.

This small species is notable for its coloring, the whole insect being of a somewhat full red color except the elytra which are black (or nearly so), with a little tendency to rufescence about the shoulders.

S.W. Australia; Eyre's Sand Patch.

COLPOCHILA.

C. Roei, Burm., is certainly, I think, identical with *C. crassiventris*, Blanch. The latter is the older name.

PETINOPUS (gen. nov. *Sericoidarum*).

Mentum antice profunde triangulariter emarginatum; palpi labiales modici, articulo ultimo gracili cylindrico; palpi maxillares sat elongati, articulo ultimo quam præcedens multo longiori; labrum a clypei parte antica verticali bene discretum sed vix prominulum (fere ut *Scitalæ*); oculi magni nitidi vix manifeste granulati, antice fere integri; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata quam palporum maxillarum articulus ultimus parum longiori (maris quam feminae haud longiori); prothorax transversus; elytra geminato-striata; tibiæ anticæ extus 3-dentatæ, posticis modicis latis intus sat fortiter arcuatis; unguiculi simplices; sternæ parce pilosa; tarsi posteriores 4 maris subtus longe dense pilosi.

The species for which I propose this new generic name has the appearance of a *Colpochila*,—though very much smaller than any *Colpochila* known to me,—but is at once distinguishable from the species of allied genera by the sides of its clypeus not cutting into the eye. I find however a faintly marked smooth but scarcely elevated line on the eye occupying the position that in allied genera is occupied by the canthus-like prolongation of the clypeus. Another notable character consists in the long closely placed pilosity on the underside of the hind and intermediate tarsi in the male which gives those organs an appearance from a certain point of view suggestive of a feather. In the female the hind tarsi are glabrous except at the apex of each joint. The mentum, moreover, is remarkable on account of the very deep triangular excision (reaching nearly half-way to the base) of its apical margin.

P. egrotus, sp. nov. Sat brevis; sat latus; sat nitidus; supra fere glaber; brunneo-testaceus; clypeo minus crebre, capite postice crebre subaspere, prothorace vix crebre minus fortiter, scutello fere ut prothorax, elytris fortius subcrebre, pygidio fere ut prothorax, punctulatis; clypeo antice rotundato reflexo; prothorace quam longiori duplo latiori, antice minus angustato, angulis anticis sat acutis parum productis posticis rotundato-obtusis; scutello magno triangulari; elytris leviter geminato-striatis, interstitiis nonnullis angustis subconvexis; tarsorum posticorum articulis 1—4 inter se longitudine subæqualibus. Long., $4\frac{1}{4}$ l.; lat., $2\frac{1}{5}$ l.

N. Territory of S. Australia; in my collection, also in S.A. Museum.

GLOSSOCHEILIFER (gen. nov. *Sericoidarum*).

Mentum antice latum fortiter emarginatum; palpi fere ut *Diphyllocera* (labialibus modicis articulo ultimo sat elongato apicem versus angustato, maxillaribus sat elongatis articulo ultimo quam præcedens sat longiori); labrum fortiter productum, ad apicem angustatum et reflexum; oculi sat magni, sat nitidi, fere læves, antice a cantho profunde incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata hac maris articulis antennarum 2-6 conjunctis æquilonga, feminae sat breviori; prothorax transversus; elytra geminato-striata; tibiæ anticæ extus 3-dentatæ, posticis minus elongatis (parte apicali sat fortiter dilatata); unguiculi simplices; sterna pilis elongatis dense vestita; tarsi maris quam feminae multo longioribus robustioribus.

This genus differs from all its allies in the remarkable form of its labrum, which is very large and projects forward from the lower extremity of the front (subvertical) face of the clypeus,

bending obliquely upward, and viewed from above looks like a protruding tongue.

G. labialis, sp. nov. Elongato-ovatus; nitidus; supra fere glaber, subtus in sternis femoribusque pilosus; piceo-niger, antennis palpisque rufis, pedibus (praesertim coxis anticis) plus minusve rufescentibus; clypeo minus crebre, capite postice confertim (hoc exemplorum visorum in medio fovea leviter impresso), prothorace sparsim (ad latera magis crebre), elytris sat sparsim, parum fortiter punctulatis; pygidio in medio sublævi, ad latera sparsius subtiliter punctulato; clypeo antice rotundato sat reflexo; prothorace postice marginato, sat transverso, lateribus sat fortiter arcuatis, angulis anticis acutis minus productis posticis rotundato-obtusis, basi utrinque sinuata; elytris in disco distincte striatis (sed striis minus perspicue geminatis), latera versus minus distincte striatis (sed striis perspicue geminatis); tarsorum posticorum articulo basali quam 2^{na} sat breviori. Long. $6\frac{1}{2}$ —7l.; lat. $3\frac{1}{5}$ l.

W. Australia; taken by Mr. Lea at Mt. Barker.

SCITALA.

In Proc. Linn. Soc., N.S.W., 1890, pp. 539-545, I wrote at some length on the claims of this name to retention,—it having been substituted by Burmeister and Lacordaire for *Sericesthis*. I need not now repeat the arguments I then employed, but merely observe that I contended for the claims of *Sericesthis* to be retained in preference to *Scitala*. In doing so I followed the distinguished authors quoted above in the assumption that the type of *Sericesthis* is congeneric with the type of *Scitala*. Lately however I have seen reason to consider that assumption unwarranted. I take it that the type of *Sericesthis* is the species for which Boisduval first used the name,—viz. *S. geminata*,—and that is undoubtedly a later name for *Melolontha pruinosa*, Dalm. Now the type of Erichson's genus *Scitala* is *S. sericans*, Er., a species which I am not sure that I know, but I have before me numerous species undoubtedly congeneric with it (judging by the generic diagnosis), and there appear to me sufficient reasons for the conclusion that they are not congeneric with *Sericesthis geminata*, Boisd. Erichson states that in *Scitala* the apical joint of the labial palpi is obconic and incrassate (as it is in the numerous species referred to above) and he so figures it. But in *S. geminata*, Boisd., it is elongate, cylindric, and very slender. The shape of that joint is a very important character which that eminent specialist Dr. Sharp relies upon as a leading distinction of his genus *Anodontonyx*. I find, moreover, that all the species known to me congeneric with *S. sericans* have the base of the

prothorax margined while in *Sericesthis geminata*, Boisd., the prothorax has no basal margin. On these grounds I have concluded that *Scitala* and *Sericesthis* are both valid genera, and I know of no other species than *geminata*, Boisd. (= *pruinosa*, Dalm.) that can be attributed to the latter.

Dr. Sharp's genus *Anodontonyx* has the labial palpi of *Scitala* as figured and described by Erickson [a fact which Dr. Sharp seems to have overlooked,—probably taking *S. pruinosa* on Lacordaire's authority as the species of (so-called) *Scitala* with which he compared his *Anodontonyx*,—though he probably has seen also some true *Scitala* for he says that the apical joint of the labial palpi in *Scitala* is "generally" slender]. *Anodontonyx* however is perfectly distinct from both *Sericesthis* and *Scitala* by another character (mentioned by Dr. Sharp) viz. that the antennal club is short. This is more fully expressed by saying that in *Anodontonyx* the antennal club is alike in the sexes while in *Scitala* it is much longer in the male than in the female and in both sexes is considerably longer than that of *Anodontonyx*.

Boisduval and Erickson appear to have included species of other genera in their *Sericesthis* and *Scitala* respectively (a matter with which I hope to deal in the next part of this series of papers) but that does not appear to touch the validity of the genera inasmuch as their characters should rest in the one case on the characters of the species to which the name was first applied (without a diagnosis) and in the other case on the diagnosis.

The seven species described by me in my paper referred to above under the name *Sericesthis* (on the assumption that *Sericesthis* and *Scitala* are identical) I must now transfer to *Scitala* (regarding that genus as distinct from *Sericesthis*).

NOSPHESTHIS (gen. nov. *Sericoidarum*).

Mentum antice vix perspicue emarginatum; palpi labiales sat breves, articulo ultimo subconico; palpi maxillares parum elongati, articulo ultimo quam præcedens vix longiori; labrum sat prominulum, antice (superne visum) emarginato-truncatum; oculi sat magni nitidi vix manifeste granulati, antice a cantho profunde incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata, quam palporum maxillarum articulus ultimus haud longiori; prothorax transversus; elytra striata (haud geminatim); tibiæ anticæ extus 3-dentatæ, posticis sat brevibus ad apicem dilatatis intus arcuatis; unguiculi parvi simplices, sed ad basin lamella membranacea instructi; sterna pilis longis minus dense vestita.

This genus has the facies of *Frenchella*, from which it is readily distinguished by the membranous lamella at the base of each claw, as well as by the form of the apical joint of the labial palpi and of the antennal club. I suspect the type is a female, but I have no doubt the male scarcely differs in external structure; I do not recollect an instance of an Australian *Melolonthid* having an extremely abbreviated antennal club in the female and a longer one in the male. I judge the type to be a female only because its tarsi are short and slender. The sexual distinctions in the genera to which this is related are very slight, usually almost confined to the length of the tarsi where the antennal club is not in both sexes notably longer than it is in the insect before me.

N. parvicornis, sp. nov. Fem.? Sat nitida; rufo-ferruginea; pilis elongatis fimbriata; corpore subtus pygidioque pilosa; capite confertim rugulose punctulato, clypeo late truncato-rotundato, antice fortiter reflexo; antennis 9-articulatis, clava perbrevis quadrata 3-articulata; prothorace fortiter transverso, antice fortiter angustato, sparsius (quam caput multo minus crebre) punctulato, lateribus sat æqualiter arcuatis, angulis anticis vix acutis posticis obtusis, basi minus fortiter bisinuata; scutello punctulato; elytris sat fortiter sat æqualiter striatis, interstitiis fortius vix crebre punctulatis; pygidio subopaco, creberrime subtilissime ruguloso-punctulato; tarsis brevibus; articulo apicali inter unguiculorum baseos lamina instructo; unguiculis brevibus fortiter curvatis. Long., $6\frac{1}{2}$ l.; lat. $3\frac{1}{3}$ l.

N.S. Wales; taken by Mr. Lea at Forest Reefs.

FRENCHELLA.

In addition to the species of Blanchard and Burmeister already mentioned by me (Pr. Linn Soc, N.S.W., 1892, p. 104) as probably needing to be transferred from *Haplonycha* to *Frenchella*, I find that *H. iridescens*, Blanch., is almost certainly a *Frenchella*; I have examples before me which seem to be clearly that species. The following are new ones.

F. hispida, sp. nov. Sat nitida; ferruginea, prothorace prope marginem lateralem medium macula obscura notato; supra pilis elongatis fimbriata et in capite elytris pygidioque pilis longis erectis sparsim vestita; subtus sat pilosa; capite crebre fortiter rugulose punctulato, clypeo antice rotundato modice (minus quam *F. lubrici*, Black.) reflexo; antennis 8-articulatis, clava sat elongata 3-articulata; prothorace sat fortiter transverso, antice fortiter angustato, quam caput multo minus crebre punctulato, lateribus superne visis a

basi ad medium fere parallelis hinc antrorsum subsinuatim convergentibus (a latere visis, paullo pone medium rotundato dilatatis), angulis anticis acutis posticis acutis nonnihildentiformibus, basi bisinuata; scutello punctulato; elytris sat æqualiter striatis, interstitiis subconvexis sat fortiter punctulatis; pygidio fere ut elytra punctulata et pilosa.

Maris antennarum clava quam articuli ceteri conjuncti haud breviori; feminæ paullo breviori. Long. 6—6½ l.; lat. 3—3¼ l.

For remarks on this species see the following (*F. approximans*). Victoria and N.S. Wales.

F. approximans, sp. nov. Sat nitida; fusca, antennis palpisque dilutioribus, nonnullorum exemplorum elytris et corpore subtus plus minusve rufescentibus; ut *F. hispida* pilosa; capite antennisque ut *F. hispida*; prothorace sat fortiter transverso, antice fortiter angustato (nonnullorum exemplorum obsolete canaliculato), quam caput vix minus crebre punctulato, lateribus superne visis fere ut *F. hispida* sed a latere visis multo minus fortiter (et vix pone medium) rotundato-dilatatis; cetera ut *F. hispida*. Long. 6—7 l.; lat. 2¼—4 l.

This species is readily distinguishable from nearly all the other described Australian Sericoid *Lamellicornes* with simple claws by the long slender erect hairs that are thinly placed in longitudinal rows on its elytra. It is, however, extremely close to *F. hispida* from which it differs by its darker color, the considerably closer puncturation of its prothorax and the different lateral outline of its prothorax. If this be looked at from the side it is seen in *F. hispida* to form a strong curve the extreme convexity (that is, the point where the prothorax is at its greatest width) of which is markedly behind the middle, whereas in the present species it is only very feebly curved outward, and the extreme convexity of the curve is scarcely behind the middle of the length of the lateral margin. Owing to the declivity of the sides of the prothorax this difference is scarcely noticeable when the prothorax is looked at from above.

N.S.W.; Sydney and northern districts.

F. hirticollis, sp. nov. Sat nitida; fusca, plus minusve rufescens; fere ut *F. hispida* pilosa sed pilis erectis in prothorace ut in elytris vestita; capite ut *F. hispida*; antennis 9-articulatis, clava sat elongata 3-articulata; prothorace sat fortiter transverso, antice angustato, dupliciter punctulato (puncturis majoribus solis setiferis), lateribus superne visis modice arcuatis (latitudine majori pone medium posita) basin versus sinuatis (a latere visis fere ut *F. hispida* sed etiam magis fortiter rotundato-dilatatis); cetera ut *F. hispida*.

Maris antennarum clava quam articuli ceteri conjuncti haud breviori; feminae paullo breviori. Long., 7—7½ l.; lat., 3½—3¼ l.

Allied to the preceding two, but easily distinguishable by the following characters:—The antennae nine-jointed, the prothorax (as well as the elytra) clothed with long erect pilosity, the prothoracic puncturation consisting of two kinds of punctures intermingled (one kind manifestly smaller than the punctures on the prothorax of *hispidæ* and non-setiferous, the other kind much larger and setiferous), the sides of the prothorax very manifestly sinuate behind the middle (viewed from above) and evidently more abruptly—indeed almost sub-angularly—dilated behind the middle, and more abruptly declivous (viewed from the side).

N.S.W.; all the specimens I have seen are, I believe, from the Sydney district.

F. aspericollis, sp. nov. Mas. Sat nitida; fusco-rufescens; pilis elongatis fimbriata, capite pygidioque pilis erectis vestitis, corpore subtus piloso; capite antennisque ut *F. hispidæ*; prothorace fere ut *F. hispidæ* sed creberrime aspere punctulato; elytris magis subtiliter punctulato; pygidio (exempli typici) longitudinaliter fortiter carinato; cetera ut *F. hispidæ*.

Fem. latet. Long., 5½ l.; lat., 3 l.

Near *F. hispidæ* but with elytra devoid of erect setae (I do not think this is due to abrasion). Very distinct also by the extremely close asperate puncturation of the prothorax and the very evidently finer puncturation of the elytral interstices, as well as by the strongly carinate pygidium,—though I do not find the carination of the pygidium a reliably constant character in all the Australian *Lamellicornes*.

N.S. Wales; Armidale; given to me, I believe, by the late Mr. Olliff.

F. sparsiceps, sp. nov. Mas. Sat nitida; rufescens; pilis elongatis fimbriata, corpore subtus piloso; capite postice minus fortiter minus crebre haud rugulose (parte media fere laevi), clypeo (hoc minus brevi antice rotundato) magis crebre magis æqualiter, punctulatis; antennis 9-articulatis, clava quam articuli ceteri conjuncti sat longiori; prothorace sat fortiter transverso, antice fortiter angustato, sparsius (quam *F. hispidæ* sat minus crebre) punctulato, cetera ut *F. hispidæ*; scutello sat laevi; elytris fere ut *F. hispidæ* sed interstitiis multo minus grosse punctulatis.

Fem. latet. Long., 6 l.; lat. 3½ l.

I have seen two males of this species—both in inferior condition and both taken by Mr. Lea near Sydney. The species is at

once distinguishable from all the preceding by its much more sparsely and smoothly punctured head. In both the examples before me there are two large faintly marked impressions between the eyes, but this is probably not a constant character. *F. sparsiceps* is also distinguishable from all the preceding except *hirticollis* by its nine-jointed antennæ, and from that species by its considerably longer antennal club and the absence of erect pilosity on the upper surface.

N.S. Wales.

ANACANTHOPUS (gen. nov. *Sericoidarum*).

Mentum subangustum; palpi labiales sat breves, articulo ultimo minus elongato subovali; palpi maxillares elongati, articulo ultimo quam præcedens duplo longiori; labrum parvum sed distinctum, parum exstans, antice (superne visum) emarginatum; oculi modici sat nitidi, subtiliter granulati, antice a cantho incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata [hac maris (?) quam articuli 2-6 conjuncti vix longiori]; prothorax transversus; elytra striata (haud geminatim); coxæ posticæ quam metasternum parum breviores; tibiæ anticæ extus bidentatæ, posticis brevibus ad apicem valde dilatatis spinoso-ciliatis (sed haud calcaribus a ciliis distinctis armatis) certo adpectu bilobis; unguiculi simplices; sterna breviter sparsim pilosa.

A very remarkable genus which I refer with much hesitation to the *Sericoides*. The species described below has the facies of a *Dynastid*, and I have not a specimen which I can afford to damage to the extent that would be necessary to examine its abdominal stigmata, but its nine-jointed antennæ justify me I think in excluding it from the *Dynastides*. Assuming it to be a *Melolonthid* there is nowhere to place it but in the *Sericoides* from which I can find no structural character to separate it. But wherever it be placed the remarkable structure of its hind tibiæ should make it easy to recognise. These are extremely dilated at the apex where they bear a continuous fringe of strong stout spines but nothing that can be distinguished from the rest of these spines as being "apical spurs." It is to be noted that its eyes are smaller and more distinctly granulated than in most of the genera allied to *Colpochila* and *Sericesthis*, and thus approximate to the *Caulobius* type, but as they project laterally as far as the clypeus I think the genus should be grouped with the former two rather than the last-named. The evident resemblance on facies to the next genus (*Engyops*) which is certainly a *Sericoid* tends to confirm this in the place I have given it. I am uncertain of the sex of the specimen before me but I do not think that important since (from the analogy of allied genera) it is

unlikely that if it be a female the male differs materially except in probably having a longer antennal club. I have not been able to make a proper examination of the front margin of the mentum (which is rugulose and clothed with extremely long setæ, and therefore difficult to study without dissection).

A. inermis, sp. nov. Sat late ovalis; minus convexus; sat nitidus; supra sat glaber; supra piceo-niger, corpore subtus antennæ palpis pedibusque rufescentibus; capite cum clypeo crebre grosse, prothorace sparsim minus fortiter, pygidio sat grosse, punctulatis; prothorace leviter transverso, antice fortiter angustato, lateribus fortiter rotundatis, basi utrinque subsinuata, angulis anticis acutis vix prominulis posticis rotundato-obtusis; elytris substriatis, striis sat fortiter punctulatis, interstitiis subtilius seriatim punctulatis sat planis; tarsorum posticorum gracilium articulo basali quam 2^{us} sublongiori. Long., $3\frac{1}{2}$ l.; lat., $1\frac{4}{5}$ l.

Tropical Queensland.

ENGYOPS (gen. nov. *Sericoidarum*).

Mentum sat angustum; palpi labiales sat breves, articulo ultimo minus elongato, subdilatato, ad apicem acuminato; palpi maxillares elongati, articulo ultimo quam præcedens duplo longiori; labrum modicum, bene exstans, antice (superne visum) emarginato-truncatum; oculi permagni inter se subapproximati, sat nitidi, subtiliter granulati, antice a cantho incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata (hac maris quam articuli 2-6 conjuncti paullo longiori); prothorax transversus; elytra striata (haud geminatim); coxæ posticæ minus elongatæ; tibiæ anticæ extus 3-dentatæ, posticis sat brevibus ad apicem modice dilatatis; unguiculi simplices; sterna sparsim pilosa.

The species for which I propose the above generic name must certainly I think stand near the preceding one (*Anacanthopus inermis*) on account of the close resemblance between them in respect of the oral organs (the narrow rough mentum clothed with very long sparse setæ, the very long apical joint of the maxillary palpi, &c.), and a decided agreement in facies. The present insect however has a less marked resemblance to a *Dynastid* and differs from the preceding in several important structural characters. It is distinguished from all the other Australian *Sericoides* so far as my observation goes by its very large eyes, the interval between which is so narrow that the middle part of the head (limited in front by the clypeal suture, on the sides by the eyes, and behind by a line joining the hind extremities of the eyes) is scarcely if at all wider than long.

E. spectans, sp. nov. Sat late ovalis; minus convexa; subnitida; suprasatglabra; ferruginea; capite crebre fortius, prothorace sparsim minus fortiter, pygidio fortiter minus crebre, punctulatis; prothorace sat transverso, antice fortiter angustato, lateribus-leviter arcuatis, basi utrinque vix sinuata, angulis anticis acutis vix prominulis posticis rotundato-obtusis; elytris sat fortiter punctulato-striatis, interstitiis sat fortiter nec seriatim punctulatis subconvexis; tarsorum posteriorum articulo basali quam 2^{as} sublongiori. Long., $3\frac{1}{2}$ l.; lat. $1\frac{4}{5}$ l.

Southern Queensland,

COLPOCHILODES (gen. nov. *Sericoidarum*).

Mentum antice sat fortiter emarginatum; palpi fere ut *Frenchella* (labialibus modicis articulo ultimo sat elongato sat cylindrico, maxillaribus sat elongatis articulo ultimo quam præcedens sat longiori); labrum totum plus minusve exstans, antice (superne viso) truncato vel late emarginato; oculi sat magni nitidi vix manifeste granulati, antice a cantho profunde incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata (hac maris angusta elongata quam articuli præcedentes conjuncti vix breviori, feminae multo breviori); prothorax transversus; elytra geminato-striata; tibiæ anticæ extus tridentatæ, posticis fere ut *Sericesthis* (elongatis, gracilibus, intus fere rectis); unguiculi simplices; sterna pilis elongatis dense vestita.

The species for which I propose the above new generic name cannot be satisfactorily placed in any previously characterised genus. With the general characters in other respects of a *Colpochila* it combines the hind tibiæ of a *Sericesthis*,—slender, elongate, and having their inner edge straight, which gives it a facies quite unlike that of either of the above named genera. Besides the species described I have seen two others from W. Australia, but as each of them is represented by a unique female it would not be wise to describe them at present.

C. raucipennis, sp. nov. Elongato-ovatus; sat nitidus; supra fere glaber, sternis femoribusque pilosis; ferrugineus vel piceo-ferrugineus; clypeo crebre subfortiter, capite postice acervatim minus fortiter, prothorace sparsius (ad latera sat crebre) sat fortiter, elytris sat grosse rugulose, pygidio minus crebre subfortiter, punctulato; prothorace postice haud marginato, sat transverso, lateribus (superne visis) pone medium fere rectis, angulis anticis subacutis minus prominulis posticis rotundato-obtusis, basi utrinque sinuata; scutello lævi; elytris geminato-striatis, interstitiis nonnullis angustis convexis sed sculptura nonnihil propter rugositatem obscura;

tarsorum posticorum articulo basali quam 2^{us} parum breviori.
Long., 7—8½ l. ; lat., 3½—4 l.

W. Australia ; Perth, Albany, &c.

NEO (gen. nov. *Sericoidarum*).

Mentum antice leviter emarginatum ; palpi labiales modici, articulo ultimo subcylindrico haud vel vix dilatato, sat elongato ; palpi maxillares modici, articulo ultimo quam præcedens sat longiori ; labrum in medio vix prominulum, antice (superne visum) emarginato-truncatum ; oculi magni nitidi subtilissime granulati, antice a cantho profunde incisi ; antennæ (specierum cognitarum) 9-articulatæ, clava 3-articulata (hac maris quam articuli 1-6 conjuncti haud breviori, femine sat breviori) ; prothorax transversus, basi haud marginata ; elytra varie striata ; coxæ posticæ minus elongatæ ; tibiæ anticæ extus 3-dentatæ, posticis sat brevibus ad apicem dilatatis intus arcuatis ; unguiculi simplices ; sterna sparsim pilosa.

This genus (which seems peculiar to tropical Australia) differs from *Colpochila* in facies more widely than in structural characters. It is however distinct by several good characters,—especially its prothorax not margined at the base its short hind coxæ and the sparseness of the pilosity on its sterna. The canthus cutting into the front part of the eye moreover is much less divergent from the clypeal outline than in *Colpochila*, being evidently a mere prolongation of the clypeus, while in *Colpochila* it has the appearance of a carina distinct from the clypeal outline. It should be noted that this genus presents the very rare (among the Australian *Sericoides*) character of including among species with simply striate, one at least with geminate-striate, elytra. In the latter however the striation is very different from that of *Colpochila*, *Scitala*, &c., the width of the interstices between stria and stria of the pairs being very little less than of the alternate interstices and all the interstices being equally flat, whereas in *Colpochila*, &c., the wider interstices are twice as wide (or more) as the narrower ones and the latter are distinctly more convex than the former.

N. usta, sp. nov. Ovata ; sat convexa ; nitida ; supra glabra ; rufo-brunnea, capite prothorace pedibusque obscuris ; capite cum clypeo sat crebre sat grosse, prothorace sparsius subfortiter, punctulatis ; prothorace sat fortiter transverso, antice fortiter angustato, lateribus sat rotundatis, basi retrorsum declivi utrinque vix sinuata, angulis anticis acutis subprominulis posticis rotundato-obtusis ; elytris subtilius punctulato-striatis, interstitiis subtilius confuse punctulatis, planis ; tarsorum posticorum articulo basali quam 2^{us} subbreviori.

Maris antennarum clava quam articuli 1-6 conjuncti vix longiori, pygidio nitido sparsim distincte punctulato.

Feminæ antennarum clava sat breviori, pygidio minus nitido subobsolete punctulato. Long., $4\frac{1}{2}$ — $5\frac{1}{2}$ l.; lat., $2\frac{1}{4}$ —3 l.

Tropical Queensland.

N. yorkensis, sp. nov. Ovata; modice convexa; nitida; supra glabra; rufa, elytris antennisque testaceis; capite cum clypeo crebre fortiter, prothorace sparsim subfortiter, pygidio sparsim subtilius, punctulatis; prothorace sat fortiter transverso, antice fortiter angustato, lateribus sat rotundatis, basi retrorsum declivi utrinque manifeste sinuata, angulis anticis acutis subprominulis posticis obtusis (vix rotundatim); elytris minus regulariter striatis, striis fortius punctulatis, interstitiis sat planis sparsim fortius punctulatis; tarsorum posticorum articulo basali quam 2^{us} distincte breviori.

Maris antennarum clava quam articuli 1—6 conjuncti fere sesqui longiori.

Feminæ antennarum clava quam articuli 1—6 conjuncti sat breviori. Long., $5\frac{1}{2}$ l.; lat., $2\frac{4}{5}$ l.

Differs from the preceding in color, also in the much longer antennal club of the male, the prothorax notably less strongly declivous hindward across the base, the considerably stronger puncturation of the elytra, the absence of sexual difference in the sculpture of the pygidium, &c.

Tropical Queensland.

N. planicollis, sp. nov. Ovata; modice convexa; nitida; supra glabra; rufa vel rufo-testacea, capite infuscato, prothorace magis obscure rufo, elytris antennisque pallidis; capite quam clypeus manifeste minus crebre, prothorace sparsim subfortiter, punctulatis; prothorace fortiter transverso, antice sat fortiter angustato, lateribus sat rotundatis, basi haud retrorsum declivi utrinque parum sinuata, angulis anticis acutis parum prominulis posticis obtusis (vix rotundatim); elytris geminato-striatis, striis sat fortiter punctulatis, interstitiis (ex his, alternis quam cetera paullo angustioribus minus punctulatis vix convexioribus) sat fortiter confuse punctulatis; tarsorum posticorum articulo basali quam 2^{us} sat breviori.

Maris antennarum clava quam articuli 1—6 conjuncti plus quam sesquialtiori, pygidio sparsim subfortiter punctulato.

Femina latet. Long., $5\frac{4}{5}$ l.; lat., 3 l.

Resembles the preceding (*N. yorkensis*) in color but differs from it in the considerably longer antennal club of the male (which to a casual glance looks about twice as long as all the

preceding joints together), in the basal part of the prothorax not being declivous hindward, in the elytral stria distinctly running in pairs, &c.

Tropical Queensland.

SCITON.

For the original diagnosis (P. L. S., N.S.W., 1892, p. 101) it will be well to substitute the following fuller one.

Clypeus antice truncatus, lateribus sinuatis; mentum antice emarginatum, lateribus pone apicem profunde excisis; palpi labiales modici, articulo ultimo dilatato; palpi maxillares parum elongati, articulis robustis (apicali 2^o longitudine æquali quam 3^{us} sat longiori); labrum vix exsertum, antice (superne viso) truncatum vel late vix emarginatum; oculi magni nitidi vix manifeste granulati, antice a cantho profunde incisi; antennæ (specierum cognitarum) 9-articulatæ, clava 3-articulata (hac maris * cogniti quam articuli præcedentes 5 conjuncti paullo longiori, feminae paullo breviori); prothorax transversus; elytra geminato-striata; tibiæ anticæ extus tridentatæ, posticis fere ut *Sericesthis* (elongatis, gracilibus, intus fere rectis); unguiculi simplices; sterna pilis erectis sat brevibus minus perspicuis vestita, pedibus sparsim pilosis.

A very distinct genus on account of the form of the clypeus (recalling that of *Mæchidius*), the peculiar excision of the sides of the mentum disclosing the extreme base of the labial palpi, and the scarcely exserted labrum resembling that of the genus I take to be *Ocnodus*.

S. paullus, sp. nov. Ovatus, minus elongatus; subopacus, non-nihil pruinosis; supra glaber; rufo-ferrugineus, antennis palpisque testaceis; clypeo nitido in medio subgibbo crebre squamose, capite postice prothoraceque vix manifeste, elytris parum distincte, pygidio nitido subtiliter sat crebre, punctulatis; prothorace sat transverso, antice minus angustato, lateribus leviter arcuatis, basi utrinque leviter sinuata, angulis anticis acutis minus prominulis posticis superne visis sat (nec acute) rectis; elytris geminato-striatis, interstitiis alternis angustioribus subconvexis; tarsorum posticorum articulo basali quam 2^{us} paullo longiori. Long., 5—5 $\frac{3}{4}$ l.; lat. 2 $\frac{4}{5}$ —3 l.

Very much like *S. ruber*, Blackb., but much smaller, and easily distinguished *inter alia* by its clypeus being quite gibbous in the middle longitudinally (so that from a certain point of view it appears foveate on either side) and by the notably longer basal

* *i.e.* *S. paulli*, sp. nov.

joint of its hind tarsi. I have before me a third species of this genus (also from W.A.) which is not however in fit state for description.

W. Australia.

DYSPHANOCHILA (gen. nov. *Sericoidarum*).

Mentum antice leviter emarginatum; palpi labiales modici, articulo ultimo subconico sat dilatato; palpi maxillares elongati, articulo ultimo quam præcedens multo longiori; labrum a clypei parte antica verticali nullo modo discretum; oculi magni nitidi vix manifeste granulati, antice a cantho profunde incisi; antennæ (speciei typicæ) 9-articulatæ, clava 3-articulata (hac maris quam articuli præcedentes conjuncti multo longiori, feminae haud observatæ); prothorax transversus; elytra haud manifeste striata; tibiæ anticæ extus 2-dentatæ, posticis elongatis minus robustis intus fere rectis; unguiculi simplices; sterna femoraque pilosa.

This genus is easily distinguished by the total absence of any distinction between the labrum and the deep downward-vertical front face of the clypeus (which is even more complete than in the genus that I take to be *Ocnodus*), in combination with hind tibiæ of the *Sericesthis* type. Its facies is something like that of *Anodontonyx*.

D. pilosipennis, sp. nov. Sat brevis, sat lata; modice nitida; supra pilis subtilibus elongatis erectis sparsius vestita, subtus in sternis femoribusque pilosa; brunneo-testacea; clypeo crebrius fortiter, capite postice sparsim sat grosse, prothorace fere ut clypeus sed paullo minus crebre, elytris crebrius sat fortiter, pygidio fortius minus crebre, punctulatis; clypeo antice rotundato-reflexo; prothorace postice in medio haud marginato, transverso, antice angustato, angulis anticis minus acutis minus prominulis posticis acutis leviter retrorsum prominulis, basi utrinque sinuata; elytris haud distincte striatis; tarsorum posticorum articulo basali quam 2^{us} paullo breviori. Long., $4\frac{1}{2}$ l.; lat., $2\frac{2}{5}$ l.

An easily recognisable species on account of the long erect hairs clothing the upper surface. In one example I can detect no indication of elytral striæ, in the other there are very faint traces of striæ arranged in pairs; they are however scarcely distinguishable, but sufficient to show that the striation, such as it is, is of the geminate type.

W. Australia; Swan R. Taken by Mr. E. F. W. Blackburn and Mr. Lea.

HAPLOPSIS.

M. Lacordaire regards this genus as identical with *Heteronyx*. His remarks seem to imply that he had seen at least one of its

species, but it is difficult to believe he can really have done so, as he says that it has "entirely the general appearance" of *Heteronyx*,—which is far indeed from being the case. Together with a very *different* facies, it has simple claws and the club of the antennæ remarkably elongated. Structurally it is near *Caulobius* (which Lacordaire also merges in *Heteronyx*, quite erroneously I am convinced). Superficially it is easily separated from *Caulobius* by the presence (at any rate in all the described species) of conspicuous pubescent vittæ on the elytra; but it is difficult to specify satisfactory *structural* distinctions because *Caulobius* must I think for the present be allowed to embrace species that will probably have to be treated eventually as types of distinct genera. The insect which Burmeister has described as *Caulobius* (*Sericesthis cervina*, Boisd.) is I think pretty certainly not congeneric with *C. pubescens*, Le Guillou; but as I have not to my knowledge seen the former I am unable to deal with the matter confidently, and must treat *Caulobius* sufficiently loosely to include in it both those which Burmeister attributes to it. Regarded thus, the only one of Burmeister's characters that seems reliable is a very slight (but as far as my observation goes a very constant) one, viz. the presence in *Caulobius* but not in *Haploopsis* of a minute tooth on the external margin of the front tibiæ close to the base of those organs. In his tabulation Burmeister distinguishes the two genera by the form of the labrum, which in *Caulobius* is said to be,—and in *Haploopsis* not to be,—prominent and separated by a distinct suture from the vertical front face of the clypeus. This holds good in respect of *Haploopsis* and *Caulobius pubescens* but not in respect of some other species before me which, I feel confident, are congeneric with *C. cervina*. So again Burmeister says there are eight joints in the antennæ of *Caulobius* and nine in those of *Haploopsis*,—but the variability of the Australian *Heteronyx* in very closely allied species of numerous genera is so great as to render this character worthless. The other notable distinctive character mentioned by Burmeister,—viz. the presence of sexual variation in the clypeus of *Haploopsis* and not of *Caulobius*,—is an important one if constant,—but I have not before me (and still less had Burmeister before him) a sufficiently long series of species and specimens to say confidently whether it is constant. That *Haploopsis* and *Caulobius* are two thoroughly good genera I should say there is not the shadow of a doubt,—nor have I much doubt that all Burmeister's distinctive characters (except that founded on the number of antennal joints) will stand, but I suspect that Burmeister's diagnosis of *Caulobius* was drawn up on *C. pubescens* only and that *C. cervinus* if examined would be found not to correspond with the diagnosis of *C. pubescens* in respect of the labrum and to differ in other

respects of generic importance. Owing to this suspicion I have included among the new species under *Caulobius* (below) some species which I place in the genus only provisionally (as probably congeneric with *C. cervinus*, Burm., ? Boisd.), but for which I think a new generic name will be required eventually.

H. debilis, sp. nov. Piceo-nigra; subænescens; subnitida; capite prothoraceque pilis elongatis erectis pallide brunneis, elytris pilis decumbentibus griseis vittatim positis, corpore subtus pedibusque pilis albidis sat crebre, vestitis; capite prothoraceque sat crebre nec fortiter punctulatis; hoc fortiter transverso, antice angustato, lateribus leviter arcuatis, angulis anticis productis posticis obtusis; elytris obscure rugulosis, 5-lineatim (plus minusve manifeste) longitudinaliter convexis, lineis glabris vix rugulosis.

Maris clypeo antice truncato subtiliter marginato, antennarum clava elongata.

Feminae clypeo rotundato, antennarum clava minus elongata.

Long., $2\frac{1}{2}$ —3 l.; lat., $1\frac{1}{5}$ — $1\frac{2}{5}$ l.

Easily distinguishable by the form of the clypeus which in front is simply truncate in the male and rounded in the female with its margin not reflexed. The prothorax is notably less coarsely punctulate than in its allies and the tarsi are much more slender than those of *H. lineoligera*, Blanch.

S. Australia; Eyre's Peninsula.

H. Olliffi, sp. nov. Obscure viridis; subnitida; supra pilis griseis (in elytris vittatim dispositis), subtus pilis albidis vestita; capite prothoraceque grosse minus crebre punctulatis; hoc minus fortiter transverso, antice angustato lateribus arcuatis, angulis anticis productis posticis obtusis; elytris granulato-rugulosis, 5-lineatim (plus minusve manifeste) longitudinaliter convexis, lineis glabris vix rugulosis.

Maris clypeo antice fortiter reflexo, producto, late truncato; antennarum clava modice elongata.

Feminae clypeo antice vix producto, anguste reflexo, late truncato; antennarum clava vix minus elongata. Long., 3 l.; lat., $1\frac{2}{5}$ l.

The decidedly green coloring of this species distinguishes it from all its known congeners except *viridis*, Blackb., and the clypeus of its male strongly produced and upturned in front with the apex sharply truncate distinguishes it from them all.

Northern N.S. Wales; given to me by the late Mr. Olliff.

H. lineoligera, Blanch. The synonymy of this species was given wrongly by Burmeister, and has been taken over by other authors from him. A very casual comparison of descriptions renders this manifest, and it seems incomprehensible that Bur-

meister could have made such a mistake; equally so that he should have re-described under another name (*grisea*) an insect which he believed to be already described by Blanchard and then have deliberately placed Blanchard's name as a discarded synonym below his own. Is it possible he can have thought this course justified by the fact that the specimen he described bore a MS. name affixed to it by Hope at a date possibly earlier than that of Blanchard's publication? However that may be *H. pilosa*, Burm. (and not *grisea*, Burm.) is evidently the same as *lineoligera*, Blanch., and therefore the name *pilosa*, Burm., must drop (as a synonym of *lineoligera*) and *grisea*, Burm., must stand as a good species.

CAULOBIOUS.

I have discussed this genus above in connection with *Haplopsis*. The following species are I think new.

C. punctulatus, sp. nov. Sat nitidus; subcylindricus; rufescens, capite prothorace metasternoque picescentibus; pilis brevibus pallidis suberectis minus confertim vestitus; capite rugulose sat grosse sat crebre punctulato, clypeo antice truncato sat fortiter reflexo; prothorace transverso, antice angustato, rugulose grosse sat crebre punctulato, lateribus arcuatis (latitudine majori paullo pone medium posita) basin versus subsinuatis, angulis anticis acutis posticis suberectis, basi media modice lobata; scutello parum manifeste punctulato; elytris fortiter sat grosse crenulato-striatis, interstitiis angustis inæqualiter nec fortiter convexis; tibiis anticis dentibus 2 prope apicem sat magnis et altero minuto ad basin externis armatis; antennis 9-articulatis, clava sat elongata quam articuli ceteri conjuncti vix breviori; tarsis 4 anterioribus (posticis exempli typici carentibus) modice elongatis, articulis ad apicem fortiter clavatis 2° quam 1^{us} longiori. Long., 3 l.; lat., 1 $\frac{3}{5}$ l.

I am uncertain of the sex of the unique type of this species, as I do not find any very reliable external sexual characters in *Caulobius*. The labrum is scarcely distinct from the front face of the clypeus and is pointed behind, its point being opposite to an emargination of the mentum.

W. Australia; taken by Mr. Meyrick, near Albany.

C. advena, sp. nov. Subnitidus; subcylindricus; piceo-brunneus antennarum stipite tarsis elytrisque plus minusve rufescentibus; pilis brevibus pallidis suberectis subtilibus minus confertim vestitus; capite crebrius minus grosse minus profunde punctulato, clypeo antice truncato sat fortiter reflexo, antennis 9 (?) articulatis, clava sat elongata quam articuli ceteri conjuncti vix breviori; prothorace transverso, antice

angustato, crebre minus profunde (nullo modo grosse) punctulato, lateribus arcuatis (latitudine majori paullo pone medium posita) basin versus manifeste sinuatis, angulis anticis acutis posticis sat acute rectis, basi media modice lobata; scutello vix manifeste punctulato; elytris inæqualiter subtilius punctulato-striatis, interstitiis sat latis inæqualiter minus fortiter convexis; tibiis anticis et tarsis anterioribus 4 ut *C. punctulati*, tarsorum posticorum articulo 2° quam 1^{us} plus quam duplo longiori. Long., 3 l.; lat., 1 $\frac{2}{3}$ l.

Very close to the preceding structurally but with the sides of the prothorax evidently more sinuate near the base, the hind angles distinctly sharper, the color throughout (very notably that of the antennal club) quite different, the puncturation of all the upper surface much feebler and finer, &c. It should be noted that there is a difference in the form of the clypeus between these two species for although it is truncate in both when viewed from above, its front outline viewed from in front is straight in this species but sinuate in *C. punctulatus*. The labrum seems to differ somewhat in form from that of *C. punctulatus* the middle of its hind margin not appearing pointed, but that difference is possibly only apparent as in the unique type of the present species the labrum is closely in contact with the mentum and in the other is fully exposed. The antennæ are in a very unfavorable position for examination of the minute joints that form the funiculus and I cannot get sight of them with a microscope but I am almost sure they are 9-jointed.

Australia or Tasmania; exact habitat not known, but probably Tasmania, as a considerably broken specimen in my collection from that island does not seem to me to differ from the type except in larger size (long. 3 $\frac{2}{3}$ l.) and decidedly more rufescent elytra.

C. discedens, sp. nov. Subnitidus; brevior; niger, capite prothoracis lateribus sutura antennis pedibusque obscure rufescentibus; pilis brevibus subrectis albidis sat confertim vestitus; capite sat fortiter minus crebre vix rugulose punctulato, clypeo antice truncato sat fortiter reflexo; antennis 9-articulatis, clava sat elongata quam articuli ceteri conjuncti vix breviori; prothorace sat transverso, antice angustato, rugulose grosse sat crebre punctulato, lateribus arcuatis (latitudine majori paullo pone medium posita) basin versus subsinuatis, angulis anticis acutis posticis subrectis, basi media modice lobata; scutello coriaceo; elytris confuse vix perspicue sed sat grosse punctulato-striatis, interstitiis minus angustis leviter valde inæqualiter convexis; tibiis anticis ut *C. punctulati* sed brevioribus magis latis; tarsis anterioribus

4 fere ut *C. punctulati* sed brevioribus minus gracilibus; tarsis posticis sat brevibus, articulo 2° quam 1^{us} vix duplo longiori. Long., $2\frac{1}{2}$ l.; lat. $1\frac{2}{3}$ l.

Differs from *C. punctulatus* (apart from color and size) chiefly as follows:—The clypeus viewed from in front is not sinuate; the prothorax is less strongly transverse; the sculpture of the elytra is extremely confused (and difficult to describe) consisting of coarse but not deep punctures which run unevenly in indistinct striæ and have an *ill-defined* appearance, their interstices very little raised and much wider than in *punctulatus* and extremely irregular (here and there almost disappearing in vague rugulosity) and generally much serrated by the seriate punctures (in *punctulatus* the punctures of the striæ being markedly coarser and deeper and much more regularly seriate); the tibiæ are conspicuously shorter and evidently wider (though with similar external dentation, two well defined teeth close to the apex and one minute tooth at the extreme base); the anterior 4 tarsi are manifestly stouter and shorter; the whole insect is shorter and wider. The much coarser puncturation of the prothorax readily separates this species from *C. advena*.

W. Australia; taken by Mr. E. Meyrick.

C. compactus, sp. nov. Subnitidus; brevis; niger; palpis antenarumque stipite dilutioribus; pilis erectis in capite prothoraceque sat longis ferrugineis, in elytris brevibus pallidis vestitus; capite sat grosse crebrius rugulose punctulato, clypeo antice truncato fortiter reflexo; antennis 9-articulatis, clava elongata quam articuli ceteri conjuncti haud breviori; prothorace minus fortiter transverso, antice angustato, grosse rugulose sat crebre punctulato, lateribus arcuatis, (latitudine majori paullo pone medium posita), angulis anticis acutis posticis subrectis, basi media modice lobata; scutello coriaceo leviter inæquali; elytris minus distincte punctulato-striatis, interstitiis angustis vix convexis obscure rugulosis; tibiis anticis ut *C. punctulati*; tarsis anterioribus 4 fere ut *C. punctulati* sed intermediis quam antici sat brevioribus; tarsis posticis elongatis gracilibus, articulo 2° quam 1^{us} plus quam duplo longiori. Long., 2— $2\frac{2}{3}$ l.; lat. $1\frac{1}{10}$ — $1\frac{3}{10}$ l.

This species is in general facies much like *C. discedens* but is notably blacker with the prothorax less strongly transverse and much more closely punctured; the elytra also are very differently sculptured; to a casual glance their sculpture might be described as closely rugulose the rugulosity having a seriate arrangement, but when closely examined they are seen to be in reality closely striate-punctulate, the rows of punctures so close as to be almost

confluent and the intervals (both between series and series and between puncture and puncture of the series) squamose-rugulose in such fashion as greatly to obscure the puncturation.

Mountains of Victoria and N.S. Wales.

C. evanescens, sp. nov. Minus nitidus; sat brevis; niger, palpis anternarum stipite et nonnullorum exemplorum tarsis dilutioribus; pilis pallidis decumbentibus vestitus; capite crebrius sat grosse punctulato, clypeo sat elongato antice minus lato subrotundato vix reflexo; antennis 9-articulatis, clava sat elongata quam articuli ceteri conjuncti vix breviori; prothorace leviter transverso, antice leviter angustato, crebrius rugulose sat grosse punctulato, lateribus arcuatis (latitudine majori vix pone medium posita), angulis anticis acutis posticis obtusis (sed bene determinatis), basi media minus fortiter lobata; scutello coriaceo parum inæquali; elytris crebre minus fortiter seriatim punctulatis, parum rugulosis, interstitiis minus distinctis; tibiis anticis fere ut *C. punctulati* sed brevioribus latioribus; tarsis ut *C. discedentis*. Long., $1\frac{1}{2}$ l.; lat., $\frac{4}{5}$ l.

This minute *Lamellicorn* is evidently allied to *C. discedens* but may be at once separated from it and from all the other described *Caulobii* by its clypeus evidently more elongate and very much less strongly reflexed at the apex. Although I have not broken off an antenna for examination under a microscope (the only way to be absolutely certain of the number of minute joints in the funiculus) I have, I think, seen quite plainly through a Coddington lens that there are four joints in the funicle,—so that the antennæ are nine-jointed.

W. Australia; taken by Mr. E. Meyrick.

MÆCHIDIUS.

This genus presents the difficulty usual in Australian entomology of containing a certain number of species so vaguely described that it is impossible to identify them without examining the types. The number of names that have been given to species of *Mæchidius* is, I believe, 33 (excluding *Albertisi*, Fairm., *bilobiceps*, Fairm., and *gracilis*, Waterh., which have not the prosternal sutures open to receive the antennæ and have the *Sericid* structure of the mouth; they are allied to *Diphucephala* and are members of, or very near to, the genus *Epholcis*). Of the 33 names really appertaining to *Mæchidius* four must be dropped as synonyms, viz. *Kirbyanus*, Westw. = *spurius*, Kirby, *excisus*, Waterh. = *rugosicollis*, Macl., *raddonanus*, Westw. = *sordidus*, Boisd., and *sinuaticollis*, Blackb. = *mellyanus*, Westw. Of the remaining 29, two (viz. *obscurus*, Macl., and *parvulus*, Macl.) are so slightly described that it is impossible to form a clear idea of

them and I am obliged to pass them by. Thus I regard the genus as at present consisting of 27 valid species to which I shall presently add eight additional ones. Of the 27, there are six that I have been unable to identify, on which I offer the following notes.

M. spurius, Kirby is from N.S. Wales. It is a large species (long., 5 l.) with simple claws, the clypeus very feebly emarginate, the basal angle of the prothorax obtuse, the elytra with rows of minute tubercles, and the hind tibiæ with their external apical process extremely elongate. This latter character enables me to place it confidently in tabulating the genus. I have no doubt the *Mæchidius* from W.A. which Mr. Waterhouse (Tr. E. S. Lond. 1875 p. 193) thinks a possible var. of *spurius* is *mellyanus*, Westw., which at p. 201 of the same paper the author mentions as unknown to him.

M. brevis, Waterh., from North Queensland, is scarcely described, the remarks on it consisting of little more than the mention of certain differences from *M. ater*, Waterh., without any definite statement whether in all respects not specified the description of *M. ater* stands good for *M. brevis*. Thus there is a considerable element of doubt about some of the characters,—e.g., the color (which is unusual and probably constant in *M. ater*). If *M. brevis* is of the same deep black color as *M. ater*, I have not seen it. If it is of a different color the description is valueless.

M. corrosus, Waterh., is a large species (long., 5½ l.) from Tasmania with appendages to the claws, and the hind angles of the prothorax “not at all acute.” I have seen nothing like it.

M. sexdentatus, Waterh., is a rather small species (long. 3¼ l.) from Adelaide with the head “tridentate on either side.” Among the numerous South Australian examples of *Mæchidius* that I have seen there is not one with the head sculptured as that of *sexdentatus* is said to be. The only species I have seen from any locality with sculpture at all approaching it has the sides of the prothorax excised (which they do not appear to be in *sexdentatus*) and is from Sydney and agrees very well with the description of *M. emarginatus*, Waterh.

M. Froggatti, Macl., is a species of moderate size (long., 4 l.) from N.W. Australia. The only very notable character in the description is a costa running hindward from the humeral angle (?the humeral “callus”). I do not think I have seen the insect. *M. antennalis* (described below) has such a costa, but is quite different in other respects from the description.

M. bidentulus, Fairm., is a small species (long., 3 l.) from Queensland. It has simple claws and is said to be notable by the presence of two blunt teeth on the head. I am satisfied that I have not seen it.

It should be added that the identification of *M. sordidus*, Boisduval, seems rather doubtful. Boisduval's description would apply to almost any *Mæchidius*, but Mr. Waterhouse (loc. cit.) gives some information regarding it which he says is founded on "authentic specimens," but without stating the grounds on which he considers them "authentic." Moreover there is a considerable difficulty in understanding his remarks. Under the heading of *M. sordidus* he says that that species is one of the commonest *Mæchidii* in S. Australia, and describes its prothorax as "very slightly narrowed posteriorly, the posterior angles slightly less than right angles." I can at once identify the insect (which is the only common one in S. Australia, and also occurs in Victoria and N.S. Wales) on which that description is founded, but under the description of the next species (*M. emarginatus*) Mr. Waterhouse speaks of the "posterior emargination" of the prothorax in "the preceding (species)" and says that *emarginatus* is closely allied to it. These statements appear quite impossible to reconcile with each other. I, however, suppose that by some means the place of *emarginatus* in the memoir was changed after the description was written and that *sordidus* was not intended by "the preceding," but some other species (perhaps *excisus*, Waterh.). Therefore I take *sordidus*, Waterh., to be the insect on which the remarks under the name "*sordidus*" were founded, —not that referred to (under the heading "*emarginatus*") as "the preceding."

Mæchidius is a genus in which the species are for the most part easily distinguishable *inter se* by well marked characters, and are readily tabulated. There is however one character that it is impracticable to disregard in a tabulation, but which nevertheless cannot conveniently be used without a few preliminary remarks, and that is the form of the hinder part of the prothorax, which is alike in scarcely any two species of the genus. But the gradations of difference from one species to another are not marked enough to make easy the division of the species into groups founded on this character. In a few species the base of the prothorax is straight or evenly curved, with the sides also evenly curved; then we find species in which the base is more or less sinuate and the sides evenly curved; then species in which the sinuation of the base becomes so strong that it should be called rather an "excision" (in some the excision being so angled at both ends that there is an opening for question which is the true basal angle); and then species in which the excision takes in more or less of the *side* of the prothorax so distinctly that there can be no hesitation in calling the hinder extremity of the excision the "hind angle of the prothorax." I have tried several methods of forming groups on this

character and find the most workable to be founded on the difference between a "sinuation" and an "excision" without regard to the question whether the inequality is in the side or the base. Even taking this as the crucial point, there is nevertheless a possibility of doubt in respect of a few species which group the insect should be referred to, and therefore it seems desirable to specify *M. clypealis*, *acutangulus*, and *imitator* as species in respect of which there is room for doubt whether the emargination of the hind part of the prothorax should be regarded as a strong sinuation or a moderate excision. With this qualification I believe that it will be easy to distinguish the described species by means of the following tabulation.

- A. Claws without basal appendage.
- B. Upper surface not clothed with long erect hairs.
- C. Hind tibiæ normal (not as CC).
- D. Prothorax not excised in its hinder part.
- E. Hind tarsi not particularly slender,—their basal joint notably shorter than the next two together.
- F. External apical process of hind tibiæ very long,—about same length as longer spur on inner side.
- G. Hind angles of prothorax acute *mellyanus*, Westw.
- GG. Hind angles of prothorax obtuse *spurius*, Kirby.
- FF. External apical process of hind tibiæ notably shorter.
- G. Hind angles of prothorax very acute and strongly prominent hindward.
- H. Elytra with well defined costæ *latus*, Waterh.
- HH. Elytra not costate ... *ater*, Waterh.
- GG. Hind angles of prothorax right or moderately acute, not (or scarcely) prominent hindward
- H. Clypeus very strongly triangularly excised in front.
- I. Prothorax of normal convexity *major*, Blackb.
- II. Prothorax strongly convex longitudinally ... *gibbicollis*, Blackb.
- HH. Clypeus widely and feebly emarginate in front.
- I. Basal joint of hind tarsi about same length as apical joint.
- J. Base of prothorax feebly sinuate ... *crenaticollis*, Blackb.
- *JJ. Base of prothorax profoundly sinuate on either side ... *clypealis*, Blackb.
- II. Basal joint of hind tarsi notably shorter than the apical joint ... *ordensis*, Blackb.
- GGG. Hind angles of prothorax obtuse (though not at all rounded off) *collaris*, Blackb.
- EE. Hind tarsi slender,—their basal joint about as long as the next two together.

- F. Hind angles of prothorax acute ... *longitarsis*, Waterh.
 FF. Hind angles of prothorax obtuse
 (much rounded off) ... *rufus*, Hope.
 DD. Prothorax in hinder part distinctly excised,—the basal edging not continuous round the excision.
 E. A distinct angle immediately in front of the excision.
 F. The prothorax considerably narrowed in front.
 G. Basal joint of hind tarsi very short, not longer than apical spur of tibiæ
 *H. The angle at front of prothoracic excision strongly dentiform ... *acutangulus*, Waterh.
 *HH. The angle at front of excision not dentiform ... *imitator*, Blackb.
 GG. Basal joint of hind tibiæ considerably longer than apical spur of tibiæ ... *rugosicollis*, Macl.
 FF. The prothorax as wide in front as at base ... *modicus*, Blackb.
 EE. No angle at front of prothoracic excision ... *hopeanus*, Westw.
 CC. Hind tibiæ angularly dilated externally at about the middle of their length.
 D. Prothorax very sparsely punctulate ... *tibialis*, Blackb.
 DD. Prothorax closely punctulate ... *rugosipes*, Blackb.
 BB. Upper surface clothed with long erect hairs.
 C. The uppermost external tooth of front tibiæ placed at about the middle of their length ... *pilosus*, Blackb.
 CC. The uppermost external tooth of front tibiæ placed much below the middle of their length ... *variolosus*, Macl.
 AA. A quill-like appendage at the base of each claw.
 B. Prothorax not excised in front of the hind angles.
 C. Joints of the antennal club shorter than the rest of the antennal joints together.
 D. Uppermost tooth of the front tibiæ placed at about the middle of the length of the tibiæ.
 E. Base of prothorax strongly sinuate on either side, so that the angles are acute.
 F. Puncturation of prothorax not particularly coarse.
 G. Interstices of the elytral striæ wide (each with two rows of punctures) ... *sordidus*, Boisid.
 GG. Interstices of elytral striæ much narrower,—the striæ being much more numerous ... *multistriatus*, Blackb.

* These species may be considered intermediate between the group in which the prothorax is excised and that in which it is merely sinuate in its hinder part.

- FF. Puncturation of prothorax extremely coarse *macleayanus*, Westw.
 EE. Base of prothorax not sinuate,—the angles not acute *caviceps*, Blackb.
 DD. Uppermost tooth of front tibiæ placed considerably below middle of length of tibia *atratus*, Burm.
 CC. Joints of antennal club as long as the rest of the antennal joints together *fissiceps*, Macl.
 BB. Prothorax excised in front of the hind angles.
 C. Club of antennæ three-jointed.
 D. Side of prothorax with a strong angle in front of the excision *emarginatus*, Waterh.
 DD. Side of prothorax rounded at front of excision *excisicollis*, Blackb.
 CC. Club of antennæ five-jointed *antennalis*, Blackb.

M. gibbicollis, sp. nov. Late subovatus minus depressus; minus nitidus; piceus, antennis testaceis; setulis brevibus subtilibus minus crebre vestitus; capite antice triangulariter fortiter exciso, lateribus sat fortiter bisinuatis; prothorace gibbo fortiter transverso, antice sat angustato, confertim rugulose punctulato, lateribus sat fortiter crenulatis modice arcuatis, angulis anticis subacutis sat productis posticis rectis (vix acute), basi utrinque sat fortiter sinuata; elytris crebre punctulato-substriatis, interstitiis nonnullis leviter convexis quam ceteri paullo latioribus; tibiis anticis extus fortiter 3-dentatis (dentibus intervallis sat æqualibus inter se divisis); tarsorum posticorum articulo basali quam 2^{us} parum longiori; unguiculis simplicibus. Long., $4\frac{1}{2}$ l.; lat., $2\frac{1}{2}$ l.

This species bears a strong resemblance to *M. fissiceps*, Macl., but belongs to a different section of the genus owing to its having no quill-like appendages at the base of its claws. Its clypeus scarcely differs from that of *M. fissiceps*, but *inter alia* the general form of the insect is considerably wider and shorter, the prothorax is less narrowed anteriorly and the teeth of its front tibiæ are much larger more acute and more evenly spaced *inter se*. It must also be near *M. bidentulus*, Fairm. (which has similar claws), but that insect is described as a *small* species (long. 6 mm.) of oblong form with the sides of the elypeus not sinuate, while the present insect is much larger, is of exceptionally short wide form, and has the sides of the clypeus strongly sinuate. The strong longitudinal convexity of the prothorax (best observed by looking at that segment from the side) is a little more marked than in *M. fissiceps* and distinguishes it from most of its congeners.

W. Australia; Roebuck Bay. Given to me, I believe, by Mr. J. J. Walker.

M. ordensis, sp. nov. Minus brevis, sat parallelus; minus nitidus; nigro-piceus, antennis dilutioribus; setulis minutis sparsim vestitus; capite antice leviter late nec triangulariter emarginato, lateribus vix sinuatis; prothorace sat fortiter transverso, antice parum angustato, confertim aspere nec grosse punctulato, lateribus subtilissime crenulatis leviter arcuatis, angulis anticis subacutis modice productis posticis obtusis retrorsum subprominulis, basi utrinque sat fortiter sinuata; elytris crebre striatis, striis sat latis, interstitiis latis convexis biseriatis punctulatis et transversim rugatis (sculptura latera versus confusa); tibiis anticis extus (exemplorum visorum) obsolete obtuse 3-dentatis; tarsorum posticorum articulo basali crasso quam 2^{us} paullo longiori; unguiculis simplicibus. Long., $3\frac{2}{5}$ l.; lat., $1\frac{3}{5}$ l.

A rather narrow parallel little species, with a general resemblance to *M. modicus*, but differing by its clypeus only feebly and roundly emarginate in front with front angles quite rounded off, its prothorax not emarginate before the hind angles which are obtuse, and the much shorter and thicker basal joint of its hind-tarsi. In the two examples before me the front tibiæ are externally feebly trisinate rather than toothed, but it is possible this is due to the apex of the teeth having been worn off.

W. Australia; sent by Mr. Lea from Ord River, Kimberly district.

M. collaris, sp. nov. Sat brevis, latus; minus nitidus; piceus, antennis dilutioribus; setulis brevibus gracilibus testaceis suberectis vestitus; capite antice late minus profunde triangulariter emarginato, lateribus sat fortiter sinuatis; prothorace fortiter transverso, antice sat angustato, sat fortiter minus crebre punctulato, lateribus sat arcuatis, angulis anticis sat acutis modice prominulis posticis obtusis, basi recta; elytris substriatis, interstitiis planis vix in æqualibus puncturis sat magnis papillatis biseriatis impressis; tibiis anticis extus obtuse 3-dentatis (dentibus inferioribus 2 approximatis a 3° sat remotis); tarsorum posticorum articulo basali quam 2^{us} sat longiori; unguiculis simplicibus. Long., 4 l.; lat., $2\frac{1}{5}$ l.

This species is very notable in the genus through the base of its prothorax being quite straight,—not at all sinuate.

S. Australia; I have no record of the exact locality of capture.

M. imitator, sp. nov. Modice elongatus; subnitidus; piceus subrufescens, antennis dilutioribus; setulis brevissimis adpressis sat sparsim vestitus; capite antice sat fortiter triangulariter emarginato, lateribus latis leviter sinuatis, angulo ante oculum acute recto; prothorace fortiter trans-

verso, antice fortiter angustato, crebre fortiter rugulose punctulato, lateribus fortiter rotundatis perspicue crenulatis, angulis anticis minus prominulis minus acutis posticis oblique semicirculariter emarginatis (angulo ante emarginationem obtuso bene definito); elytris punctulato-substriatis, interstitiis inæqualibus (nonnullis quam cetera latioribus) irregulariter granulis rugisque nitidis ornatis; tibiis anticis extus obtuse tridentatis (dentibus inferioribus 2 subapproximatis, a 3° modice remotis; tarsorum posticorum articulo basali brevi quam 2^{as} vix longiori; unguiculis simplicibus. Long., 4 l.- lat., 1 $\frac{4}{5}$ l.

Allied to *M. rugosicollis*, Macl., easily distinguishable by the characters indicated above in the tabulation.

Australia; I am not certain of the exact locality, but believe it to be in Victoria.

M. modicus, sp. nov. Minus elongatus; minus nitidus; piceus plus minusve rufescens; setulis minimis gracilibus minus crebre vestitus; capite antice triangulariter sat fortiter exciso, lateribus sat fortiter sinuatis antice subacutis; prothorace fortiter transverso, antice parum angustato, confer-tim rugulose nec grosse punctulato, lateribus subtiliter crenulatis leviter arcuatis, angulis anticis obtusis minus productis posticis oblique semicirculariter (fere ut *M. excisi*, Waterh.) emarginatis, angulo ante emarginationem fere recto; elytris crebre striatis, interstitiis leviter convexa inæqualiter rugulosis vel granulosis (nonnullis quam cetera paullo latioribus); tibiis anticis extus 3-dentatis (dentibus inferioribus 2 approximatis a 3° sat remotis); tarsorum posticorum articulo basali quam 2^{as} fere duplo longiori; unguiculis simplicibus. Long., 3 $\frac{1}{2}$ l.; lat., 1 $\frac{4}{5}$ l.

A very distinct species but bearing a general resemblance to *M. excisus*, Waterh., from which, however, it is readily distinguished *inter alia* by the much deeper excision of the clypeus, the much slighter narrowing of its prothorax in front, and the much greater length of the basal joint of its hind tarsi.

Coolgardie, W. Australia; sent by Mr. Lea.

M. multistriatus, sp. nov. Modice elongatus; subnitidus; piceus, antennis testaceis; setulis brevibus gracilibus suberectis minus crebre vestitus; capite antice sat fortiter triangulariter emarginato, lateribus latis sat fortiter sinuatis; prothorace fortiter transverso, antice modice angustato, crebre rugulose nullo modo grosse punctulato, lateribus sat fortiter arcuatis, angulis anticis obtusis sat prominulis posticis subacutis retrorsum directis, basi utrinque fortiter sinuata; elytris crebre striatis, interstitiis transversim aspere rugatis

(certo aspectu nonnullis quam cetera paullo latioribus); tibiis anticis extus 3-dentatis (dentibus inferioribus 2 approximatis a 3° sat remotis); tarsorum posticorum articulo basali quam 2^{us} sat longiori, apicali elongato; unguiculis singulis ad basin appendiculis singulis gracilibus armatis. Long., $4\frac{1}{3}$ —5 l.; lat. $2\frac{2}{5}$ l.

It is difficult to believe that this common species is undescribed and yet there seems to be no doubt that such is the case. It is nearest, I think, to *macleayanus*, Westw., to which it bears considerable resemblance; but it differs from that species *inter alia* in the wider form and less coarse puncturation of its prothorax and in the sculpture of its elytra; these in *macleayanus* present alternately more and less convex lines, the former more nitid and rugulose than the latter; in the present species the lines of sculpture are equally *inter se* convex nitid and rugulose and are narrower and separated from each other by more defined and numerous striae. The tarsi of *macleayanus*, moreover are shorter and more robust.

N.S.W. (Sydney, Forest Reefs, &c.)

M. excisicollis, sp. nov. Minus elongatus; sat opacus; piceus; antennis dilutioribus; setulis brevibus gracilibus suberectis minus crebre vestitus; capite antice sat fortiter triangulariter emarginato, lateribus latis fortiter sinuatis; prothorace fortiter transverso, antice angustato, crebre granuloso-punctulato, lateribus fortiter rotundatis obsolete crenulatis, angulis anticis sat prominulis vix acutis posticis oblique semicirculariter emarginatis (angulo ante emarginationem nullo); elytris seriatim punctulatis (puncturis singulis basi tuberculis nitidis instructis); tibiis anticis extus 3-dentatis (dentibus inferioribus 2 approximatis, a 3° sat remotis); tarsorum posticorum articulo basali quam 2^{us} paullo longiori; unguiculis singulis ad basin appendiculis singulis gracilibus armatis. Long., 5 l.; lat., $2\frac{1}{2}$ l. (vix).

A very distinct species with the prothorax very like that of *hopeanus*, Westw., but more narrowed in front, and having the basal angles dentiform; and differing from *hopeanus inter alia* by the presence of quill-like appendages at the base of the claws; also like *emarginatus*, Waterh., but differing from it *inter alia* by there being no angle before the posterior emargination of the sides of the prothorax.

Victoria; in the S. Australian Museum.

M. antennalis, sp. nov. Minus elongatus; sat opacus; castaneo-piceus, antennis testaceis clava elongata 5-articulata; setulis sat gracilibus sat elongatis adpressis minus crebre vestitus; clypeo antice late subtruncato ad latera recto, angulis anticis

acute [rectis; prothorace fortiter transverso, antice haud angustato, leviter minus crebre punctulato, in disco bifoveolato, lateribus leviter sinuato-arcuatis subtilissime crenulatis, angulis anticis obtusis minus prominulis posticis subquadratum emarginatis, angulo ante emarginationem fere recto; elytris sat crebre punctulato-substriatis, interstitiis angustis inter se æqualibus (sed costa sat fortis postice longe abbreviata a callo humerali, et altera sublateralis antice breviter abbreviata a callo subapicali, procedunt); tibiis anticis extus 3-dentatis (dentibus inferioribus 2 approximatis a 3° sat remotis); tarsorum posticorum articulo basali quam sequentes 2 conjuncti haud breviori; unguiculis singulis ad basin appendiculis singulis gracilibus armatis. Long., 4 l.; lat., 2 l.

The extraordinary antennæ of this species with a club consisting of five very elongate joints (longer than all the preceding joints together) of which that nearest the base is a little shorter than the rest distinguish it from all its described congeners known to me. I do not think the character to be sexual inasmuch as of *fissiceps* (which has almost as elongate an antennal club though only three-jointed) I have seen enough specimens to render the presence of both sexes probable and I do not find any difference in the antennæ of different examples.

N. S. Wales; a single specimen taken near Sydney.

MELOLONTHIDES (true).

RHOPEÆ.

R. hirtuosa, sp. nov. Sat elongata (præsertim mas); subtiliter pubescens et pilis erectis sat numerosis (præsertim in prothorace) vestita; testacea vel fusco-testacea; capite prothoraceque confertim aspere (clypeo grosse minus crebre nec fortiter) quam *R. heterodactylæ*, Germ. multo minus subtiliter, elytris dupliciter (ut *heterodactylæ*), pygidio ut prothorax, punctulatis; prothorace quam longiori fere duplo latiori, antice fortiter angustato, lateribus crenulatis modice arcuatis, angulis posticis obtusis; elytris ut *heterodactylæ* subcostatis.

Maris antennarum flabello elongato 7-articulato, articulo 3° (antennarum) intus producto.

Femine antennarum flabello brevi 5-articulato, articulis 4° 5° que (antennarum) intus productis. Long., 10 l. (mas.) 9 l. (fem.); lat., 4½—5 l.

This species is allied to *heterodactyla*, Germ. and *soror*, Blackb. (from the other described species its closely punctured prothorax in combination with a 7-jointed male antennal flabellum at once distinguish it) from both of which it differs by the presence of

numerous long erect hairs on the upper surface (they are almost wanting in *heterodactyla* and *soror*) and by the markedly stronger and more asperate puncturation of its prothorax, and from *soror* also by the much less strongly rounded sides of that segment. The antennæ of the male are very similar to those of the two species just named but the female has the club of its antennæ only 5-jointed (in *soror* it is 6-jointed,—I do not know the female of *heterodactyla*, but Germar implies that its antennal club is 7-jointed).

N.S. Wales.

R. morbillosa, sp. nov. *R. Mussoni* affinis. Minus elongata; supra breviter sparsim pubescens; testacea vel fusco-testacea; capite rugulose inæqualiter, prothorace fortiter vix crebre (quam *heterodactyle* multo minus crebre), elytris rugulose sat grosse, pygidio confertim aspere, punctulatis; prothoracis conformatione fere ut *R. hirtuosæ* sed angulis posticis rectis bene determinatis; elytris subcostatis (fere ut *R. heterodactylæ*).

Maris antennarum flabello elongato 5-articulato, flabelli articulis 1° 2° que quam ceteri multo brevioribus (hoc quam ille longiori ad apicem profunde emarginato).

Fem. latet.

The club of the antennæ in the male having only three long joints at once separates this species from all its described congeners. In other respects it is very much like *R. Mussoni*, Blackb., but differs *inter alia* in its prothorax considerably more closely, and its elytra evidently more coarsely, punctured.

N.S. Wales; taken by Mr. Lea near Forest Reefs.